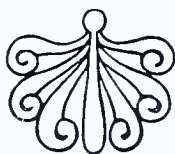




DAIRY HERD FEEDING IN ALFALFA FIELD, SACRAMENTO VALLEY.

Sacramento Valley and Foothill Counties of California

An Illustrated Description
of all the Counties
Embraced in this Richly
Productive Geographical
Subdivision of the
Golden State



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Published Under Direction of
The Sacramento Valley Expositions Commission
J. A. Filcher, Director-in-Chief
January, 1915



TROPICAL VERDURE IN PUBLIC PARK, SACRAMENTO VALLEY.

THE SACRAMENTO VALLEY AND FOOTHILLS OF CALIFORNIA



CALIFORNIA contains one vast valley lying between the Sierra Nevada mountains on the east and the Coast Range mountains on the west. It is the upper end of this extensive fertile section of the State that is designated the Sacramento Valley. It lies directly north and east of San Francisco bay and extends to the converging point of the Sierra Nevada and Coast Range mountains in Shasta County not far from the northern boundary line of the State.

The Sacramento Valley is drained by the Sacramento River, which is the largest stream in the State and fourth in tonnage importance in the United States. It is navigable from San Francisco bay to the city of Red Bluff, in Tehama County, a distance of 200 miles.

The largest city of the Sacramento Valley is Sacramento, capital of the State. It has a population of 75,000 and is a thoroughly modern and rapidly expanding municipality.

Everything that has distinguished California throughout the world is produced in that geographical subdivision of the Golden State known as the Sacramento Valley and adjacent foothill regions. It is a conservative statement to say that there is no like area anywhere that is so intense in productive capacity or so rich in the variety and quality of products yielded as this great agricultural and mineral empire.

On the floor of the Valley the lands are free from brush or stone and are ever ready for cultivation. There is no considerable growth of timber on the lowlands except willow and cottonwood. But in all counties of this Valley may be found scattered groves of wide spreading oaks, giving a parklike aspect to the landscape, and at the same time presenting mute testimony to the genuine richness of the soil.

That this was a land of unusual attractiveness because of a wonderfully equable climate and great soil productivity, was evidenced at an early day by the location in this Valley of great ranches, and in our day, of a Plant Introduction Garden by the United States Government and of an extensive University Farm for the practical use of the California State Agricultural College.

The plain or floor area of the Sacramento Valley is about 3,000,000 acres. The total area of the Valley including the adjacent foothills is 12,000,000 acres. The Valley, including the lower foothill reaches, is 200 miles long and 50 miles wide. The population reported in the official federal census of 1910 was 225,910. Thus it will readily be seen that this vast productive area is not likely, on account of con-



DRYING FRUIT IN THE SUNSHINE, SACRAMENTO VALLEY.

gestion, to be lacking in opportunity for some time for men and women who desire to prosper in rural occupations where a glorious measure of success can be attained with less expenditure of energy than in any other place on earth.

There are many flourishing cities and towns in the Sacramento Valley with churches of all denominations, elementary and advanced public schools, steam and electric railroad transportation, electric lighting and power, water transportation, and all things essential for the prosperity and comfort of the human family.

The following paragraphs contain much information in detail on the Sacramento Valley that cannot fail to prove interesting to hundreds of thousands of industrious men and women who know little of the unlimited opportunities afforded them for the achievement of health, happiness and prosperity in this wonderland in the heart of California. The reader will find in the following pages of this booklet a condensed but accurate description of each county of the Sacramento Valley and foothills region, together with a brief and uncolored statement of its resources.

Every county of the Sacramento Valley is easily accessible by railway connection with all cities in the State and it would be a journey replete with pleasure and instruction to visit this fertile Valley where deciduous fruit gardens blossom in the foothills and on the river banks, where orange blossoms perfume the breezes of Summer, where gold is taken from the hidden recesses of the eternal hills, where happiness and prosperity are the distinguishing features of every home, and where the warm hand of fellowship and hospitality is ever extended to the stranger.

Climate the Chief Factor Climate in California is a magic word because it means so much for the prosperity, happiness and comfort of the people. It is probably the most precious asset in the Golden State because it is the chief factor that has to do with making California the most wonderful producing State on the American continent.

Climatic conditions in the Sacramento Valley are ideal. The average rainfall is about 26 inches. This rainfall is distributed through four months of the year and is always ample to assure abundant cereal crops. In the Summer or "dry season," as it is called, the temperature is never oppressive because of the low percentage of humidity in the atmosphere. Work in the fields is never suspended because of high temperature nor is there ever danger of sunstroke. In the Sacramento Valley the evenings are invariably cool and the nights balmy and delightful. There is no such thing as perspiring through the night and awakening in the morning thoroughly enervated and exhausted. Each afternoon during the Summer season, the Pacific trade winds blow landward from the Pacific Ocean and towards evening they lower the atmospheric temperature of the Sacramento Valley, which is situated about fifty miles inland from the ocean shore.

The coast trend of the State being northwest and southeast, presents a right angle front to the Japan Current, that ever comes up from the southwest to lave its shores. It is this warm current that gives California its temperature and equable climate.



TOURISTS VISITING AN ORANGE GROVE IN THE SACRAMENTO VALLEY.

Latitude has no bearing whatsoever upon climate in California, although topography and altitudes affect the temperature to some degree in different latitudes.

It is a tremendous advantage that the California farmer has in climate where growth and production go on without pause. In the Sacramento Valley the grower finds his vines and trees, field and truck garden producing something for the market every month in the year. Climate also has a decided effect upon the cost of living. Where the pastures yield natural forage, green or dry, every day, where the water never freezes, where vegetable growth goes on forever, and the storage of vegetables for Winter use is never necessary because they are growing and fresh daily, it is clearly apparent that the cost of living must be less than where the Summer and Fall are spent in hard labor to store food and fuel against the long Winter that suspends production.

Market Value of Land

Prices of land in the Sacramento Valley and contiguous counties vary greatly. They range from \$30 an acre to \$300 for unimproved land. The wide variation in price is due to the difference in the kind of land and the location. The cheap lands are mostly unirrigated rolling uplands. In many localities these lands have to be cleared before they can be planted and this increases the cost. Irrigated lands can be purchased for \$150 to \$300 per acre. The prices of river bottom land range from \$175 to \$300 an acre.

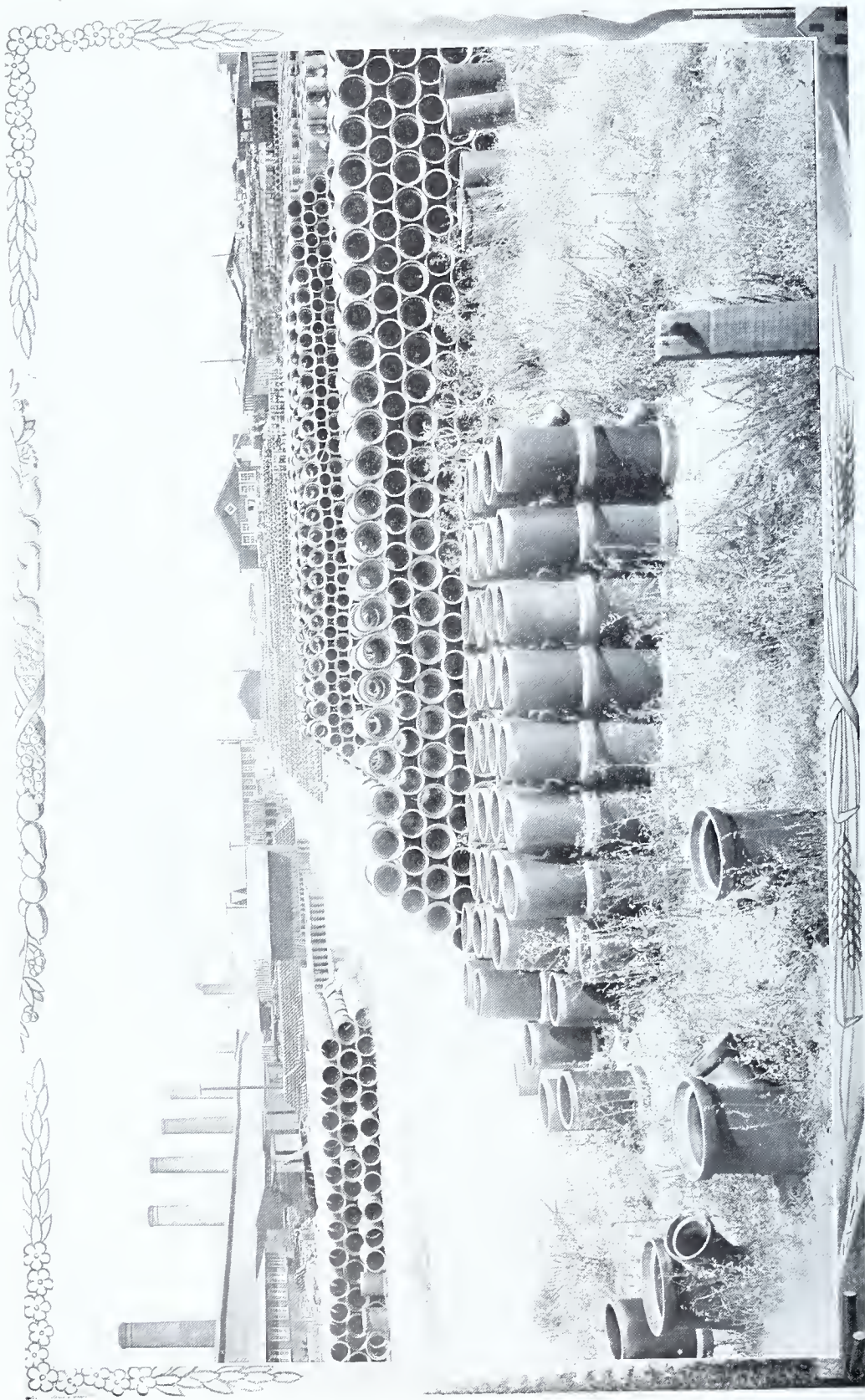
The prices of improved lands vary according to location, the value of the improvements, transportation facilities, etc. Well kept paying orchards, however, are often valued at as high as \$1,200 an acre. Frequently good opportunities are offered to purchase improved places for very reasonable figures.

As there is such a wide difference in soil types, and as location has much to do with land values, it is advised that all prospective purchasers visit and inspect personally any land that they contemplate purchasing before making their initial deposit.

Prospective Settlers and Cost of Living

Frequently prospective settlers of the Sacramento Valley and surrounding territory ask the question, "How much money must I have before coming to the Valley?" This, of course, is a very difficult question to answer, as the personal element enters into each case. Many men have come here with very little and have made wonderful successes. They had pluck and energy and were not discouraged at the first obstacles that they had to overcome. Generally speaking, however, a man with a family should have about \$3,000 in cash before coming west. This will enable him to make a substantial payment on his land and still have enough money left to tide him over the first year, which is always the hardest.

In a preceding chapter upon climate, it was stated that the cost of living is less in California than in States where the climatic conditions are more severe. Some commodities, however, and especially manufactured articles, are slightly higher in the Sacramento Valley than in Eastern localities. The freight charge from the point of manufacture to California is added to the Eastern selling price.



GREAT MANUFACTURING PLANT IN SACRAMENTO VALLEY.

The cost of building in the Sacramento Valley and foothill region is slightly higher than in Eastern States. This is due primarily to the fact that wages paid skilled mechanics are higher here than east of the Rocky Mountains. But in building homes, it is not necessary to make them as substantial in California as in the East, because of the difference in climate. Double floors, windows and door are not necessary.

Ordinary farm laborers in California are paid \$35.00 per month and board and from \$2.00 to \$2.50 a day when employed by the day. Skilled mechanics are paid from \$4 to \$6 per eight-hour day.

Fuel is not a heavy item in the Sacramento Valley. Crude oil is in general use for many purposes. Its cost averages about a dollar a barrel. Oak stoves wood costs from \$6 to \$8 a cord. Gas is used to a great extent for fuel in cities and towns. The average cost is about \$1.00 per 1,000 feet. The price of electricity for power and lights ranges from 4 to 7 cents per kilowatt hour, according to the amount used.

Electric Energy in Sacramento Valley

During the past few years electricity has become an important factor in everyday life. In the Sacramento Valley and surrounding territory, it is as much in use as in the large cities. There are many uses to which this power is put on the farm, such as running irrigation pumps, lighting purposes, turning the churn, etc. Power is very cheap in the Sacramento Valley and hence it is used extensively.

The swift streams fed by perpetual snows, which course down the steep sides of the Sierra Nevada mountains, furnish unsurpassed opportunities for the development of power. These opportunities have been taken advantage of largely by investors and to-day there are several very large companies supplying electric energy to the farmers as well as to the city dwellers in different parts of the Sacramento Valley. The possibilities of power development in this part of California have only been touched and this magic force which lights cities, moves trains and turns the wheels of industry will become cheaper to the farmer as its use becomes more general.

Modern Improved Highways

That good roads increase the profits of farm products by lessening the cost of transportation is a declaration of a recent bulletin published by the United States Department of Agriculture. It is a well known fact that California is one of the leading States in the nation in the construction of good roads, and the counties of the Sacramento Valley and surrounding mountain districts are not behind the rest of the State in this respect. Several years ago the people of California voted \$18,000,000 for good roads and a great percentage of the mileage of this great State road system is now completed. Two main trunk lines of the highway pass through the Sacramento Valley—one on the west side and one on the east side. These roads meet at Red Bluff, in Tehama County, and the road then continues through Tehama, Shasta and Siskiyou Counties to the Oregon line.

Another link of the State highway leads from Sacramento through El Dorado County across the Sierra Nevada Mountains to Lake Tahoe.



VINE COVERED HOME SURROUNDED BY TROPICAL PALMS IN SACRAMENTO VALLEY.

This is one of the noted scenic roads of California and is the route most frequently selected by tourists entering California by automobile. The Emigrant Gap road is also a scenic highway that leads from Sacramento to the northern end of Lake Tahoe through Placer County.

In addition to the State road system, many of the counties have spent large sums of money improving the lateral roads. Road building has reached a high standard here and the abundance of rock, gravel, cement, sand and petroleum used in highway construction found within the borders of the State make it possible to build the best roads for the minimum cost.

California has more automobiles per capita than any other State in the Union and is second only to New York in the number of automobiles in use, and hence the people are fully awake to the benefits of good roads. The movement now under way will result in providing in California the finest highway system in the world.

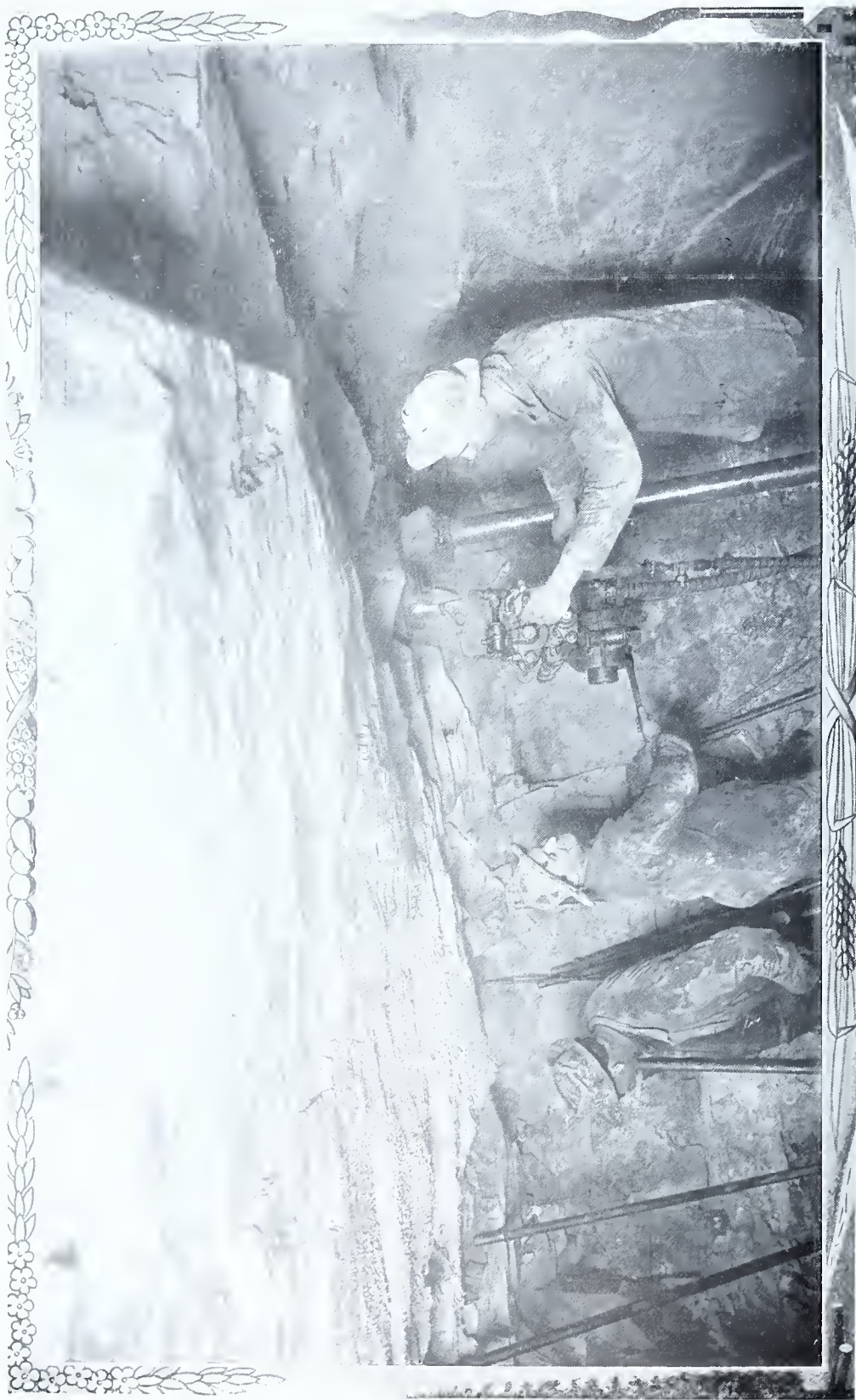
***Excellent
Transportation
Facilities***

One of the important factors to the prosperity of any community is the matter of adequate transportation. In this respect the Sacramento Valley is indeed fortunate. The Valley is served by rail and water transportation facilities which provide ample outlets for the millions of tons of foodstuffs that the rich Valley soil produces annually. First, let us consider the rail transportation. The Valley is traversed east and west by one and north and south by two main lines of the Southern Pacific Company. The east and west line is the western link on the great transcontinental line of this company and leads directly to the great markets of the Eastern States. Of the north and south main lines, one serves the east and the other the west side of the Sacramento Valley. They meet at Sacramento on the south and Tehama on the north. They lead directly to the large cities of the Northwest, which are large consumers of Sacramento Valley products. All of these lines lead to San Francisco and other main lines of the same company lead direct to Los Angeles. In addition to the main lines, the company has many branch roads which serve as feeders and reach out to fertile valley and rich foothill sections which are off the main route.

The Western Pacific, also a transcontinental road, crosses the Valley, passing through the counties of Plumas Butte, Yuba, Sutter and Sacramento.

The Valley is also served with several electric lines, which converge at Sacramento. These are the Northern Electric, running from Sacramento to Chico, the Sacramento and Woodland, running between the two cities named in the road title, the Central California Traction, running between Sacramento and Stockton, and the Oakland and Antioch, between Sacramento and San Francisco. There are also several roads in course of construction, among which are the Sacramento Valley Electric which will traverse the counties of the west side of the Valley, and the Vallejo and Northern, which will serve a very rich fruit section and connect Sacramento and Vallejo the largest city in Solano County.

Water transportation is an important factor to the producers of the Sacramento Valley, and the Sacramento River, which is navigable



UNDERGROUND GOLD MINING IN FOOTHILLS BORDERING SACRAMENTO VALLEY.

as far as Red Bluff, 200 miles from its mouth, not only provides means of transporting many crops to market, but acts as a rate regulator. Freighting on the Sacramento River is of vast importance and the stream ranks fourth among the rivers of the United States in amount of tonnage floated on it. During certain seasons of the year when the river carries a large volume of water, it is navigable to light draft ocean going vessels as far as Sacramento. Much work is being done by State and Government on improvements on the Sacramento River. Passenger traffic on the river between Sacramento and San Francisco is important, several companies operating lines of fast steamers and advertising the voyage as one of the sightseeing trips of California.

Schools and Educational Progress The Sacramento Valley and contiguous counties offer to their youth educational facilities that are the equal of those found anywhere in the world. Californians have always been liberal with their expenditures for schools and colleges and it is the aim of the people of the State to keep the educational institutions equal to the best. Every district has its school and every county has one or more high schools where students are prepared for higher education. In many of the counties there are what is known as "union high schools"—high schools built by a union of one or more school districts. A great many of such schools have been formed during the past few years and they are very popular in the rural sections as they give the country students opportunity to prepare for higher institutions.

Graduates from these high schools may enter the great University of California at Berkeley, which is but a short train ride from any part of the Sacramento Valley. At this university a student may follow any branch of higher learning desired. The tuition is absolutely free, the students, however, provide their own books, clothing, board, etc. The University of California is endowed with \$11,000,000 and is second in the United States in the number of students enrolled. Another great institution of learning available to the Sacramento Valley students is the Leland Stanford, Jr., University, at Palo Alto, endowed with \$30,000,000 and one of the richest universities on the American continent.

One of the most important institutions of learning in the State in view of the importance of the great industry of husbandry in all its branches in California, is the State Farm School at Davis, Yolo County, in the Sacramento Valley. This school is a branch of the University of California. It teaches practical knowledge on every phase of farm work. Its courses cover every topic of interest to the farmer of the Sacramento Valley and contiguous district. As it is a part of the University of California, tuition is free. The enrollment is large and is increasing year by year as the institution is spreading knowledge among farmers as to how they get the greatest production for the least cost from their land.

Another important institution in the Sacramento Valley that should be mentioned, is the State Normal School at Chico. This school is supported by the taxpayers of California and its object is to prepare young men and young women for the important work of pedagogy.



A MODERN OSTRICH FARM IN THE SACRAMENTO VALLEY.

Appropriations amounting to more than \$9,000,000 a year are made by California to her educational institutions, which shows clearly the importance placed upon the necessity of educating the youth by this State.

Denizens of Forest and Stream While the fame of the horticultural and agricultural products of the Sacramento Valley and contiguous country has spread throughout the United States, comparatively few know much of the wild life of this most favored section. It is but reasonable to expect that a country so richly endowed by nature with fertility of soil, abundance of water and salubrity of climate as the Sacramento Valley, should support a large and varied population of wild folk. In this region the antelope, deer, elk, etc., fattened on the plains before the white men settled up the country.

During the early days of the history of the State the slaughter of deer, elk and antelope was ruthless and it became necessary to pass stringent laws protecting these game animals. As a result of these laws there is more game in California now than at any previous time during the past quarter of a century. The protection measures have given the animals a chance to multiply and the hunter of to-day has no difficulty in getting his limit of two deer a season in any of the foothill and mountain sections contiguous to the Sacramento Valley. Bear, wild cats, mountain lions, etc., are to be found in the higher altitudes by those who care to penetrate the mountain depths for big game.

On the floor of the Sacramento Valley there is an abundance of rabbits, squirrels, etc., which not only furnish excellent sport in bagging them, but are toothsome when properly served.

Game birds are numerous and varied in the Sacramento Valley. There are a number of native ducks, also quail and dove, and in the mountain districts there are mountain quail and grouse. The Fall of each year also brings large flocks of migratory ducks and geese from the far north to entertain the Valley hunter.

The lover of the rod and reel will find plenty to amuse him in the Sacramento Valley and surrounding country. Trout streams are numerous in the Sierra Nevada mountains, and there are hundreds of mountain lakes that furnish excellent fishing. In the rivers of the Valley black and striped bass, perch, cat fish and crappie may be taken by the angler. Bass were introduced into the Sacramento River many years ago and have multiplied rapidly until they are now numerous enough to furnish the best of sport. They are a gamey fish and often weigh as much as eight and ten pounds each.

The king salmon is one of the important fishes of the Sacramento River. This fish is taken in large quantities and is shipped to markets all over the American continent.

In order that the trout streams of the State may not be depleted of fish, the State Fish and Game Commission maintains a number of hatcheries. The trout spawn is taken from the fish and developed at the hatcheries. When the little fish attain a size so that they are able to take care of themselves, they are shipped to streams in various parts of the State and liberated. In this way millions of fish are provided for the sport of anglers every year.



TYPICAL OLIVE GROVE IN THE SACRAMENTO VALLEY.

Wide Variety of Products Probably no like area in the world produces such a wide variety of crops as the Sacramento Valley. The list of products that are farmed for profit contains citrus and deciduous fruits, grapes, berries, nuts, olives and other sub-tropical fruits, alfalfa, cereals, and vegetables of all marketable varieties.

The Sacramento Valley supplies the markets of the nation and also many cities of northern Europe with deciduous fruits for a period of eight months in every year. Not only are the Sacramento Valley fruits the first to ripen each season, but they contain a delicacy of flavor not often found in fruit produced elsewhere.

The principal varieties of deciduous fruit grown in the Sacramento Valley and surrounding foothills named in the order in which they appear on the market are as follows: Cherry, apricot, peach, plum, pear, grape, apple. Some other varieties are produced to some extent, such as the nectarine, but those named are generally considered the standard fruits. The fig is also grown in many localities, and now that the secret of caprification has been learned, the production of commercial white figs promises to be an important industry of the future.

Cherries usually come into market in May. The first shipments are made by express and the first boxes sold bring fancy prices. The Valley cherries continue to be shipped until the middle of June and when they are about gone the mountain cherries from the foothill districts come into market. The apricot follows cherries closely on the market. This is a delicious fruit and is one of which the Sacramento Valley practically has a monopoly, as it is not produced extensively elsewhere. Peaches and plums ripen in June, July and August and the Valley pears come into the market about July 1st. In six weeks they are about all gone, but are followed by pears from the foothill and mountain districts. Grapes ripen in August and continue to be shipped to markets as late in the year as December. The finest varieties of table, wine and seedless raisin grapes are grown. The deciduous fruit season ends when the grapes are all harvested. Summer apples are produced in the Valley to some extent and the mountain districts surrounding the Sacramento Valley are not excelled for Winter apples.

There are three channels through which the fruit from the Sacramento Valley and contiguous counties is marketed. It is shipped in the fresh state in refrigerator cars by fast freight and sold in the markets in all parts of the American continent. It is also sold to canneries, where it is preserved and packed to supply the markets of the world in the Winter months. It is also cured by being sun dried and is sold in that form in many different civilized countries. The deciduous fruit crop brings many millions of dollars to the Sacramento Valley farmers each year.

Culture of Citrus Fruits In the production of citrus fruits, the Sacramento Valley is destined within a decade to be the leading citrus fruit producing section of the United States. Within the past few years thousands of acres have been planted to orange and lemon trees, which thrive here vigorously. Sacramento Valley oranges are the first to reach the markets in the Fall of the year. They ripen about the first of November and by Christmas Day



HARVESTING HAY IN THE SACRAMENTO VALLEY.

the crop is entirely harvested. This fruit is six weeks earlier in the Sacramento Valley than anywhere else on the coast, and consequently the growers get the best prices. The orange production of the Valley is now about a thousand carloads a year and this will be materially increased when all the groves recently planted begin to bear.

The olive is a popular fruit of the Valley and foothill counties. The best olives and the biggest crops in the world are produced in this region. The industry is profitable and is growing rapidly. Some of the biggest oil and ripe olive pickling plants in the State are in this Valley, yet they have to contend for supplies with the buyers from Southern California, who invade this region to replenish their stock.

Alfalfa and Dairying Alfalfa, the greatest fodder plant that grows, produces better in the Sacramento Valley than anywhere else in North America. Conditions here are ideal for it.

Ten tons to the acre is not an uncommon yield of this plant on irrigated land. Alfalfa is put to many uses. It may either be baled and sold as hay, or fed to stock and thus converted into dairy products, which are very profitable. It is also a good fattening food for hogs, and poultry growers find it a big help in their business.

Alfalfa is a sure profit payer, if that degree of intelligence necessary in any farming venture is exercised in its production and use. It is probably the best crop to engage the attention of a newcomer because it will pay dividends the first year. Hundreds of settlers who are now prospering in the Sacramento Valley and foothill counties, began with alfalfa production and later branched into dairying, fruit growing or stock raising, as they became firmly established. There is always a market for the crop. In some localities it is sold to alfalfa mills, which grind it up into a meal for Winter fodder.

Alfalfa can be grown without irrigation on river bottom soils, but on uplands the best results are obtained when the crop is given an abundance of water. When the seed is planted early in the Spring, the plant will yield a fair crop the first season and a normal crop the second year. It is cut from four to eight times a year.

The dairy business goes hand in hand with alfalfa production and is a rapidly growing industry in the counties of the Sacramento Valley and foothill regions adjacent thereto. There are creameries in nearly every county and cheese and butter making are followed extensively. There are also several large dairies devoted exclusively to the production of certified milk for consumption in the large cities of California.

Livestock Industry During the past few years great strides forward have been made by the Sacramento Valley and surrounding foothill counties in breeding of thoroughbred cattle, horses, sheep and hogs. With conditions so favorable this section of California is certain to take its place in the near future, as one of the leading stock producing valleys in America. The advantages offered here to breeders are many. First, may be mentioned the climate. The mild Winters of California enable the growers to run their stock in the open all year round. Where snow scarcely ever falls and where the mercury in the thermometer rarely drops below 32 degrees above zero, it is never necessary to lock the stock up in the barn for weeks at a



ONE OF THE GREAT POWER PLANTS, SACRAMENTO VALLEY.

time, as is done in colder regions. Secondly, the abundance of cheap feed is a big factor in favor of the stock grower. Where alfalfa produces as heavily as it does here, and where grass for grazing is green in the fields throughout the Winter months, it is plain that the cost of production is much less than where the animals are stall fed for long periods. Thirdly, stock that is in the open air so much of the time is naturally stronger and better able to resist disease, than stock that is snowbound for a part of the Winter.

Several stock farms in the Valley are devoted exclusively to the production of thoroughbred dairy and beef cattle. The breeds most favored are the Holstein-Friesian, Jersey and Guernsey in the dairy classes and shorthorns and the white-faced Herefords in beef cattle.

Rambouillets, Shropshires, Hampshires, Southdowns and Dorset Horns are the leading sheep breeds that are produced.

Much attention is being given to the breeding of fine draft horses, some excellent stallions and mares of the Percheron, Belgian, Clydesdale and Shire breeds having been introduced in the past few years.

The Farm School of the University of California at Davis, Yolo County, in the Sacramento Valley, has done much to further stock raising by the introduction of new blood and by encouraging and fostering the breeding of pure breeds.

Hogs Always in Demand Probably no branch of the stock raising industry offers greater opportunities for expansion in the Sacramento Valley and foothill counties than hog raising. There is no place in the world where natural conditions are more favorable for pork production than California and yet the production of pork in this State is far below the consumption. The only apparent reason for this is that California farmers have never given this important industry the attention it deserves. Hogs fatten on alfalfa as well as they do on corn and on the dairy farm hogs convert skimmed milk into profits. They eat up the waste and increase the income. The principal breeds now raised in the Sacramento Valley are Berkshires, Duroc Jerseys, Yorkshires, Poland China and Chester Whites.

Vegetable Production In the production of vegetables, the Sacramento Valley and surrounding districts must be recognized as one of the foremost sections of the nation. Vegetables of all varieties are grown.

Fresh cabbage from this section has been shipped in carload lots to the markets of New York and Sacramento Valley celery finds a market in many States. The most widely distributed vegetable, however, is the asparagus. On the Sacramento River delta 20,000 acres are devoted to asparagus growing. This delicious vegetable is not only shipped in the fresh state to markets in the East in the Spring, but as a canned product it is sold the entire year round in many countries of the world. Dried beans are also an important crop, particularly on the low lands. The United States Government annually purchases many tons of Sacramento River beans for use in the army. Potatoes and onions are extensively grown and are profitable. Perishable vegetables of almost endless variety are produced for local markets. In fact, practically every vegetable mentioned in the seedman's catalogue is grown in the Sacramento Valley.



DRESSING GRANITE FOR BUILDINGS IN SACRAMENTO VALLEY.

In mentioning vegetables, a paragraph should be given to the sugar beet. This is grown in many parts of the Valley. There is a large sugar factory in Glenn County that takes much of the crop and the rest is shipped to factories in Alameda County. The beet does exceedingly well on all Sacramento Valley land. It attains a large size and carries a high percentage of sugar. Growers who have planted beets have found that they pay well.

Hops Produce Heavily California is one of the leading States of the American Union in the production of hops, the only other States that produce this profitable farm product being Oregon, Washington and New York. The Sacramento Valley is the leading hop growing section of California and its production annually exceeds 75,000 bales. Hops are grown on the river bottom lands of the Sacramento River and its tributaries. Hops grown here are of a very fine quality and the yield per acre is heavier than elsewhere in the United States. The vines are usually free from insect pests which give growers trouble where climatic conditions are less favorable. Hops grow on trellises and are picked in September. An acre of Sacramento Valley land produces about a ton of cured hops.

Success in Poultry Raising Poultry raising is a field that offers excellent opportunities for success in the Sacramento Valley and foothill region. The business is followed both as a side issue in connection with other farming and as a specialized endeavor. It does not require much capital to make a start in poultry production in the Sacramento Valley, but it is essential that the poultry man understand the business. In the large cities of California there is always a brisk demand for fresh ranch eggs. Poultry raisers can produce much of the food for the flock by growing alfalfa, sunflowers, Egyptian corn, etc. The average profit is about a dollar per hen per year, although many poultry men exceed that figure.

In the northern part of the Valley turkeys are raised extensively for marketing in the large cities on Thanksgiving and Christmas. Turkeys are permitted to range over a big acreage and are herded in much the same way as sheep.

There are many fanciers in the Sacramento Valley who devote their time to fancy breeds of chickens, pigeons, ducks, geese, turkeys, etc.

Wheat, Barley and Other Grains A quarter of a century ago the Sacramento Valley was one of the greatest wheat producing sections on the American continent. Grain was the principal crop grown and the great farms contained from 1,000 to 50,000 acres. Most of these rancheros, as they were then termed, were land grants obtained from the Mexican Government before California became the property of the United States. These farms were held as originally granted for many years. Gradually, however, in recent years, they were subdivided and diversified farming was introduced. Wheat farming, therefore, declined and will never again be the important crop in the Sacramento Valley that it was in former times.



TOWING PRODUCE ON SACRAMENTO RIVER TO MARKET.

But much grain is still grown, particularly on non-irrigated lands. The Sacramento Valley also produces barley of a very excellent quality. Oats are grown in abundance and there is a large production of grain hay. Many farmers have had much success by rotating barley with other crops, such as sugar beets. This method has been found to increase the yield per acre considerably.

Culture of Berries and Nuts The great cities of the Northwest, as well as those of the Rocky Mountain States and the Middle West are familiar with Sacramento Valley berries. Ripening early in the Spring as they do, the berries of the Sacramento Valley and contiguous foothill districts supply other districts for two months or more, before their local berries come into the market. This makes berry production a profitable business. These small fruits are shipped by express in refrigerated cases and arrive at their destination in perfect condition. Shipments have been successfully made as far as New Orleans.

Almonds and walnuts are two very profitable crops in the Sacramento Valley and adjoining foothill districts. The black walnut is a native of the Sacramento Valley, but the nuts, because of their adamantine shell, are not commercial. It has been learned, however, that the English walnut grafted onto the black walnut stock is a successful producer. Many acres have been planted to walnuts during the past few years and this promises to be one of the important crops of the future.

The Sacramento Valley virtually has a monopoly on the almond production in America. Being an early blossomer, the tree will not produce in countries subject to late severe frosts. Certain sections of the Sacramento Valley, however, have been found ideal for this nut and it is a heavy and profitable producer.

Rice---a New Cereal Crop The successful production of rice in the Sacramento Valley has added a new crop to the long list of products now grown for profit. There are certain lands in Butte, Colusa, Sutter and Glenn counties on the floor of the Sacramento Valley that are unexcelled anywhere for rice production. The new crop was experimented with for several years before it was grown on a commercial scale. The experiments were highly successful and it has been learned that rice will produce about twice the yield per acre in the Sacramento Valley as in other rice growing sections of the United States. The United States Government conducts a rice experimental station at Biggs, Butte County, where hundreds of varieties are grown under different conditions for the purpose of ascertaining which treatment and which variety will produce the best. Rice requires constant irrigation and can only be grown where there is an abundance of water. The crop for 1914 in the Sacramento Valley totaled half a million bags.

Irrigation In the days when wheat kings owned much of the farm land of the Sacramento Valley, irrigation was scarcely thought of. The land owners sowed their crops and trusted to a kind Providence to take care of them. Since intensive cultivation has supplanted the former farming methods, irrigation has become an important factor in the development of the Valley lands.

There is an abundance of water to irrigate all the lands in the



EXTENSIVE AND FULL BEARING VINEYARD, SACRAMENTO VALLEY.

Sacramento Valley and contiguous foothills, and the irrigated area is constantly being increased. Irrigation practiced here is of two kinds—by well and by gravity canal. Irrigation by well has been found to be a very cheap and dependable method in practically every part of the Valley. Underlying the entire Valley is a vast subterranean water supply, which can be tapped almost anywhere. A pumping plant, operated either by electricity or by gasoline motor, can be installed for prices ranging between \$250 and \$300. Such a plant is sufficient to irrigate about ten acres.

The foothill lands and much of the Valley lands are irrigated by the gravity system. The water is taken from the mountain streams and piped to the farms. The Orland Irrigation Project, installed by the United States Government in Glenn County, is one of the important systems in the Sacramento Valley.

Enough water runs to waste every year through the Sacramento River to irrigate a far greater area than that contained in the Sacramento Valley itself.

Mineral Production Since the days of '49 mining always has been and it always will be one of the leading industries of the Sacramento Valley and foothill counties. Practically every county of which a sketch appears in this book, produces mineral wealth of some kind. The production of gold is, of course, the most valuable of all mineral outputs of this part of California, and it is the gold produced by these northern counties that keeps California in the lead among the gold producing States of the Union.

Quartz mining after the most improved methods is followed in the mountain counties, while dredge mining along several of the rivers—notably, the American, the Feather and the Yuba—is annually producing millions of dollars in fine gold.

The gold production in California in 1913, according to a report of the United States Geographical Survey, was valued at \$20,406,958. This was an increase of \$693,480 over the output of 1912, which was \$19,713,478. Of the gold production of the State 55 per cent is derived from deep mines and 45 per cent from placers.

While the output of gold is of greater value than that of any other metal in California, mining for copper is an important industry in Shasta County, where enormous deposits of copper ore have been found. Plumas is also opening up promising copper deposits. Iron ore in large quantities has also been found in different localities and an electric process smelter for reducing the iron ore has been in operation for several years at Heroult, Shasta County.

The manufacture of cement is another important mineral industry in the Sacramento Valley. California ranks third among all the States in America in value of the cement output. One of the largest plants in the State for the manufacture of this necessary building product is located in Solano County.

Among other minerals produced in this rich mining region may be mentioned: asbestos, potter's clay, macadam, limestone, slate, chrome, building stone and tremendous granite deposits.

The total value of all mineral products of California in 1913 was \$100,791,369.



TYPICAL DAIRY HERD OF SACRAMENTO VALLEY. WORLD'S RECORD COW IN CIRCLE.

Advice to New Comers Farm methods in the Sacramento Valley and contiguous foothill region differ greatly from those of Eastern States, mainly because of the vast difference of climatic conditions. Newcomers to this section, therefore, are advised to seek information from reliable sources on all farm matters upon which they may be in doubt.

In each county there is a Horticultural Commissioner, who will gladly give advice if called upon. Horticultural Commissioners usually have offices in the Court Houses of the various county seats. They are thoroughly acquainted with every section of their respective counties and will give advice on what to plant and how to plant it on the different soils. These men are experts in their line and the advice they give is free of charge. They are paid by their respective counties for this work.

Opportunities for Settlers Probably no place in the world offers better opportunities for new settlers than the Sacramento Valley and foothill region. In this land, every man will succeed if he farms intelligently and energetically; no soil on earth pays greater rewards for labor expended upon it than that of this fertile part of California.

The valley is now experiencing an era of great prosperity. It is growing steadily both in population and wealth. Each day brings new farmers who are developing the lands and aiding in the upbuilding of the community. New towns are springing up and the older ones are growing in industrial and commercial importance. New railroads are being built and there is a general expansion of all industries. Under diversified and intensive cultivation the output of farm products is increasing enormously. As prices have been uniformly good for many seasons, the producers are enjoying a profitable era.

The citizens of the counties of which this book tells are energetic, happy and prosperous. Many of them are natives of other States, but have made California their permanent home. They are contented with their present environment and want others to know of the many advantages this section offers.

Farm life in the Sacramento Valley and foothill section is not drudgery. Here the farmer in many communities enjoys all the advantages that the city man has and many others that only rural life can give. He has his telephone and his electric lights. His farm shop is run by electric power and his water is lifted by an electrically driven pump. A rural free delivery gives him his mail every morning and his newspapers on the day they are printed. A fast electric line keeps him in close communication with surrounding counties and with the large cities, where he may go when he chooses to enjoy a theater or some such pleasure and return home the same night. He has his automobile to take his family on a pleasure ride when he wishes. The butcher, baker, grocer, laundryman and iceman all call at his door to take orders and deliver supplies. His garden supplies him with fresh fruits and vegetables for his table the year round. His children go to the district school or to a nearby high school or the State University. He enjoys a healthful life in the open air and is prosperous and independent.



ONE OF THE LARGE FOOD PACKING PLANTS IN THE SACRAMENTO VALLEY.

Cost of Production and Profits

Prospective settlers on Sacramento Valley and adjacent foothill lands frequently ask for figures as to the cost of bringing some of the best paying crops into bearing and the probable profit per acre after maturity. To supply this information, the accompanying table has been prepared and the figures have been verified by Fred C. Brosius, Deputy County Horticultural Commissioner of Sacramento County. The figures quoted are average; individual instances can be given where profits are much greater. In the business of farming, much depends upon the man and the greatest success is always attained by the individual who not only understands how to grow products, but who masters the selling end of the industry as well. Most important of all is the selection of soil suited to the crop to be planted.

Product	Cost of Suitable Land	*Cost of Bringing Crop to Maturity and Years Required	Average Profit
Alfalfa	\$100 to \$300	\$20—Pays first year	\$ 25 to \$ 40
Almonds	\$ 85 to \$200	\$275—Bear fourth year	\$100 to \$200
Apricots	\$100 to \$200	\$275—Bear fourth year	\$ 75 to \$200
Apples	{ \$ 40 to \$ 75 } { (foothill land) }	\$100—Bear fourth year	\$ 75 to \$150
†Beans	\$100 to \$300	Pay first year—\$20 to \$40	\$ 45 to \$ 90
Beets (sugar)...	\$100 to \$200	Pay first year—\$30	\$ 40 to \$ 80
Cherries	\$200 to \$300	\$275—Pay fourth year	\$ 75 to \$200
Figs	\$100 to \$200	\$125—Fourth year	\$100 to \$200
Grapes (table)..	\$100 to \$200	\$50—Third year	\$ 75 to \$225
Grapes (wine)..	\$100 to \$200	\$50—Third year	\$ 60 to \$ 75
Grapes (raisin)..	\$100 to \$200	\$50—Third year	\$ 50 to \$150
Oranges	\$200 to \$300	\$300—Fourth year	\$100 to \$200
Olives	\$125 to \$200	\$275—Fourth year	\$100 to \$300
Lemon	\$200 to \$300	\$300—Fourth year	\$150 to \$400
Grape Fruit			
or Pomelloes...	\$200 to \$300	\$300—Fourth year	\$100 to \$300
Plums	\$100 to \$200	\$275—Fourth year	\$100 to \$250
Prunes (dried)..	\$100 to \$200	\$275—Fourth year	\$100 to \$400
Pears	\$200 to \$300	\$325—Fourth year	\$150 to \$500
Peaches	\$100 to \$200	\$225—Third year	\$ 75 to \$200
Rice	\$100 to \$200	\$35—Crop every year	\$ 30 to \$ 50
Strawberries ...	\$100 to \$200	Pay first year	\$100 to \$400
Walnuts	\$100 to \$300	Intercrops pay cost of bringing into bearing	\$100 to \$250

*The cost figures in this column refer to land planted on contract. The cost frequently will be much lower if the work is done by the land owner himself.

†Land suited to the culture of beans and other vegetables may be rented on a division of crop basis. The usual terms are one-third of the crop to the land owner and two-thirds to the tenant.

This table includes only such crops as are not generally grown in other farming States of the American Union. Such products as hay, wheat and barley are not included, as the cost of production and profits are about the same in California as elsewhere in the United States.



DEEPEST AND ONE OF THE RICHEST GOLD MINES IN AMERICA, AMADOR COUNTY.



MADOR COUNTY

Amador is one of the smallest counties in California, its total area being only 601 square miles. Yet it is one of the most prominent mineral counties of California, the total annual value of its mineral output being over \$3,000,000.

Foothill and mountain lands make up the county. Its western boundary touches Sacramento County in the rolling grounds of the low foothills. Its north and south boundaries are marked by the Cosumnes and the Mokelumne River respectively and its eastern line extends to the 7000 foot level of the Sierra Nevada Mountains.

The soil of Amador is rich and productive. It is alluvial in character in many of the small and fertile valleys. In the mineral belt rich red lands predominate and in the upper foothill sections it is of decomposed granite. These lands will produce all kinds of deciduous fruits and are particularly adapted to the culture of pears and prunes up to the 2500 foot level and for apples in still higher altitudes.

The climate of Amador County is like that of all the foothill sections of the Sacramento Valley. The rainy season commences in October and ends in May. The annual precipitation at Ione, which has an elevation of 287 feet, varies from 15 to 30 inches in a season. The precipitation increases as higher elevations are reached. The temperature in Summer at times reaches 100 degrees, but the atmosphere is dry and the heat is not oppressive. Cool evenings are the rule.

There never has been a failure of any crop suited to Amador's soil and climatic conditions. All lines of farming are followed and the agricultural and horticultural products are increasing the county's wealth. There is plenty of opportunity for further extending the great industry of husbandry. Land is cheap and there is ample water available for irrigation.

All crops find a ready market. Many of the growers devote their attention to supplying local markets in the mining districts. There is plenty of opportunity for developing profitable markets beyond the borders of the county.

The county is at present a heavy producer of cereals. Wheat, barley, oats and corn are all grown profitably. Much alfalfa and grain hay is also produced.

The horticultural products of Amador include practically all the fruits grown in the Sacramento Valley. The full list includes apples, apricots, plums and prunes, pears, grapes, peaches and nectarines, oranges, lemons, olives, figs, almonds, English walnuts and cherries.

Truck gardens are found in all the fertile little valleys and the owners find the mining towns profitable markets for their crops of vegetables and fruit.

Stock raising is followed extensively. The foothills and mountain plateaus afford excellent pasturage the year round.

Numerous streams cross the county from east to west, supplying ample water for mining operations and electric power development. Water is plentiful for irrigation but this valuable resource has not yet



ORCHARD SCENE IN IONE VALLEY, AMADOR COUNTY.

been fully taken advantage of. One of the great power plants of the Pacific Gas & Electric Company is located at Electra, and here is developed 33,000 horse power of electricity, which is sent over long distance transmission lines to Stockton, San Jose and the cities surrounding San Francisco Bay.

While the county has soil and climatic conditions that are favorable to the development of horticultural and agricultural resources, it is the mineral wealth that has made the name Amador famous. The Mother Lode, or great mineral belt of the Sierra Nevada Mountains, crosses the county from north to south for a distance of about twenty miles. Mining has been followed without interruption since 1848, and millions of dollars have been produced. Gold, silver and copper are extracted from the earth.

During recent years with the introduction of modern scientific methods, deep mining is followed extensively. Some of the best paying properties in the State are now being developed.

Amador is one of the leading gold producing counties of California and its output is entirely from deep quartz mines. In this county are located some of the richest and deepest quartz mines in the world. The Kennedy mine at Jackson is operating at a vertical depth of 3900 feet, and is the deepest gold mine in the United States. It is equipped with a 100-stamp mill and employs steadily about 400 men.

Directly south of the Kennedy Mine is the Argonaut, another large producer. This property is operated at a depth of 4600 feet on an incline, with a vertical depth of about 3000 feet. This mine is equipped with a 40-stamp mill and employs about 250 men. Its monthly production averages \$60,000.

North of these two mines at Sutter Creek are the South Eureka and Central Eureka Mines. The South Eureka is operated by electricity and its underground workings reach a depth of 2600 feet. It has an eighty-stamp mill and employs 300 men. It produces \$50,000 in gold a month.

Further north are the Keystone, Original Amador, Bunker Hill and Fremont mines, all steady producers. At the northern boundary of the county is the Plymouth Consolidated. This is one of the oldest mines in California. It was a heavy producer in early days, but remained idle for a period of thirty years. Within the past two years it has been newly equipped with the latest machinery and is to-day operating on a large scale, with prospects of producing heavier in the future than in the past, even though it has produced more than \$2,000,000.

An excellent grade of potter's clay is found in Amador County near Ione, and is shipped in large quantities. Coal is also mined at Carbondale, and lime, marble and building stone exist in large quantities.

The principal towns are Jackson, the county seat, Sutter Creek, Amador City, Drytown, Plymouth, Pieta, Volcano and Ione.

A branch railroad which connects with the main line of the Southern Pacific Company at Galt, in Sacramento County, affords transportation facilities to the principal mining and agricultural centers.

With a population of only about 10,000 Amador offers excellent opportunities to the farmer, the miner and the cattleman.



SCENES IN BUTTE COUNTY—LEFT. HOME OF MRS. BIDWELL NEAR CHICO; RIGHT, PICKING NAVEL ORANGES IN OCTOBER.



BUTTE COUNTY

Butte County is situated on the east side of the great Sacramento Valley. Its boundaries extend from the Sacramento River on the west to the higher altitudes of the Sierra Nevada Mountains on the east and hence it embodies within its confines every variety of scenery, valley, foothill and mountain.

The Sacramento River, which forms the county's western boundary, is California's largest stream and is navigable by river steamers throughout the year. Other important streams that traverse Butte are the Feather (and its branches), Butte Creek, Chico Creek and Honey Creek, all of which rise in the Sierra Nevadas and flow through the county into the Sacramento. The Feather River is a large stream and drains an area of approximately 4,000 square miles, furnishing numerous sites for power plants and irrigation dams. Its scenic beauty has made it world famous.

The products of Butte County are many, in fact, its soil will produce practically every variety of crop that can be grown in California. The list of products includes cereals of all kinds, hay, deciduous and citrus fruits, nuts, grapes, berries, melons, vegetables, sugar beets, hemp, flax, hops, forest products, gold and other minerals. The fruits principally grown for market are oranges, olives, figs, peaches, pears, prunes, plums, apricots, apples, cherries and nectarines. Among other fruits grown are the avacado or alligator pear, lemons, limes, pomellos, pomegranates, Japanese persimmons and loquats. Banana and date palms are grown in favored spots for ornamental purposes. Many nurseries exist for the propagation of these plants.

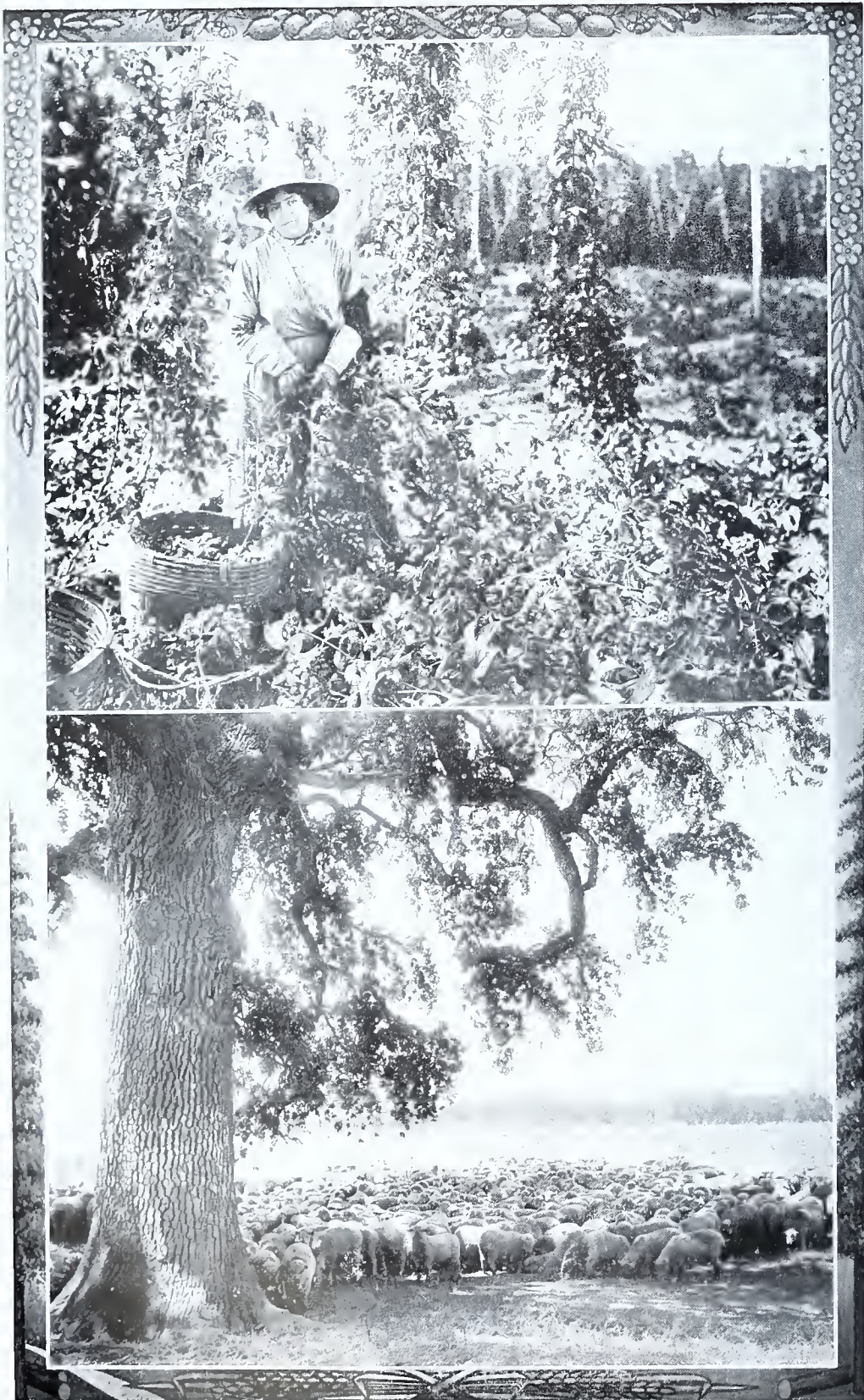
Olives have been grown for half a century and it has been fully demonstrated that the tree has found a natural home here. Climate and soil are particularly adapted to olive culture. The trees bear heavy crops and are free from tree diseases and insect pests. Butte County olives are known the world over. The growth of the industry may be judged by the fact that the value of the olive crop has increased 400 per cent during the past five years.

Approximately thirty thousand acres in Butte County are devoted to deciduous fruit trees. All the standard shipping and canning varieties are grown. Deciduous fruit orchards are found in every part of the county, although the bulk of the fruit, with the exception of the apple yield, is grown on valley and foothill lands. The mountain sections produce Winter apples of superior size and quality. The future of the apple industry can hardly be overstated.

Figs are grown in many parts of the county. This is a crop that is now attracting much attention. Since the Calimyrna fig has been introduced, which is a delicious white variety, suited for both fresh and dried sale, fig growing is becoming another important and profitable industry.

The orange is one of Butte's most valuable crops, several thousand acres being planted to this delicious citrus fruit.

Grapes attain early perfection in Butte County. An almost endless variety of table and wine grapes is grown. These grapes are marketed



GATHERING HOPS AND SHEEP SCENE, BUTTE COUNTY.

in the eastern part of the United States and in Europe. The first raisins produced in California were dried at a vineyard at Pentz, in this county.

The almond is yet another important crop. In some localities particularly adapted to culture of this nut, growers make large profits.

The growing of cereals is an important industry in Butte. Thousands of acres are planted to grain. During the past few years rice culture has been undertaken on a large scale. Experiments have proved that certain valley soils are excellent for rice production and the crop is now a means of steady and substantial incomes to hundreds of farmers. The United States Government maintains a rice experimental station near Biggs, where several hundred varieties of rice are being grown under different conditions to ascertain what variety of the product and what conditions are best adapted to the soil and climate of the Sacramento Valley.

The United States Government also maintains a large Plant Introduction Garden near Chico, where thousands of varieties of vines and trees are being propagated by government experts for the purpose of improving old and introducing new varieties of fruits, berries, vegetables, cereals, forage plants, etc.

Fine forests of merchantable timber clothe the slopes of the Sierra Nevada Mountains in Butte County at altitudes ranging from 2,000 to 5,000 feet. The principal woods are sugar pine, the finest of soft pines; yellow pine, spruce, fir and cedar. The larger trees grow to a height of 200 feet or more and attain a diameter of from four to ten feet. The great mountain forests of Butte are most valuable possessions and are contributing much to the material prosperity of the county. Properly fostered, they will continue to contribute to prosperity for many generations. The rapidity which characterizes the growth of young trees is assurance of inexhaustible timber wealth in the future.

Among the forest trees is one of great value. This is the Abietine, or orange-flavored pine, which is not known to grow in quantity elsewhere. The Abietine pine contains medicinal properties of great value. At the headwaters of Butte Creek, fifty miles northeast of Oroville at an altitude of 6,000 feet is a large grove of these rare trees.

The gold mines of the county have been famous since early days. The placer mines along the streams yielded big fortunes to the first gold seekers. To-day mining is still an important industry and the total gold output exceeds \$2,000,000 annually. The mountains are seamed with gold-bearing quartz ledges, and deep mining on scientific methods is followed with success. The gravel along the river beds contains much fine gold and this has given rise to dredge mining, which is now a big industry. One of the richest dredging fields in the State is along the Feather River in the vicinity of Oroville.

Butte County is also the scene of extensive electric power development. The swift mountain streams afford a wealth of energy, the value of which can hardly be estimated. Upon these streams electric power is being developed to light cities and to turn the wheels of industrial plants hundreds of miles away.

Oroville, on the Feather, is the county seat, and Chico, the seat of a State Normal School, the largest city; they are thriving modern cities. There are many fine schools and churches and the county as a whole is one rich in industries and its people progressive and prosperous.



PROLIFIC GROWTH OF CORN ON COLUSA COUNTY'S FERTILE SOIL.



COLUSA COUNTY

Colusa County lies in the west central portion of the Sacramento Valley. It consists of valley and foothill lands, the western boundary extending into the Coast Range Mountains. Butte Creek and the Sacramento River mark the eastern boundary of the county. The Sacramento River runs in a southerly direction through the county for a distance of about twenty miles. All the land along the river is wonderfully rich and is planted to alfalfa and orchard. A few miles back from the river is a large area of fertile plain land reaching to the foothills, farmed mainly to grain and held for the most part in great tracts. There are about 450,000 acres of agricultural land and 60,000 acres of mountain land in the county. The balance is classed as grazing land and lies on the east slope of the Coast Range.

The foothills of Colusa do not contain much commercial timber, though there is some good pine in the higher sections. A small oak grows in the foothills valuable for fuel and there is but little brush. There are many small pretty and fertile valleys in the westward lying hills. They are mostly occupied by attractive farms. Small streams are numerous in these valleys and furnish water for irrigation. The soil on the hill slopes is productive and in the higher elevations there is much good apple land. The rounded hills are suited for grapes and, if irrigated, for deciduous and citrus fruits.

The depth of the soil of the river and plain lands is almost incredible. An unusually deep well five miles out from the city of Colusa, showed no bedrock at 288 feet. It is believed that in many places a depth of 1,500 feet could be shown. The Valley of the Nile shows no better soil.

Climatic conditions are about the same as those of other counties of the Sacramento Valley. The temperature is not excessive in Summer and the Winter is characterized by the fall of ample rain to assure sufficient moisture for all cereal crops. The average annual precipitation is about 26 inches and while successful farming is done without irrigation, the tendency during the past few years is to irrigate and thus get the maximum production from the land. Irrigation in the county is done by gravity canals and by deep wells. In almost any part of the county ample water can be found by sinking wells. This source of supply has never failed, even during the driest seasons. The lands along the Sacramento River do not need irrigation for ordinary crops. These lands are very productive: the soil is silty and easily worked.

Much of the land of Colusa is farmed to wheat and barley, which a quarter of a century ago was the chief crop. In recent years, however, many new settlers have been buying farms and they have been introducing diversified crops. Alfalfa is becoming an important crop and in some sections, where water is not far beneath the surface of the ground, it is grown without irrigation. Stock raising has followed alfalfa growing and there are many dairies and several creameries and skimming stations in the county.

A large acreage in Colusa County is devoted to the culture of rice,



RICH CROP OF GRAPES IN COLUSA COUNTY, THE NATURAL HOME OF THE VINE.

which produces heavily on certain irrigated lands. In 1914 the yield was 150,000 sacks. Rice pays well and it is sure to become one of the important crops of Colusa.

Every kind of deciduous fruit grows to perfection in Colusa. Prune growing is particularly profitable. The orchards produce a fine grade of drying prune and the climatic conditions are ideal for curing this fruit in the sun during the cloudless Summer days. Peaches, pears, cherries, apricots, figs and grapes grow to perfection and excellent raisins are produced.

The almond is an important product of Colusa. Certain favored sections on the higher plain lands are ideal for the almond. These lands are in a practically frostless belt and there is little danger of injury to the almond crop by cold nights, after the blossoming time in the early Spring.

The lands of Colusa are also well adapted to the culture of citrus fruits. During the past few years thousands of acres have been planted to lemon and orange trees by a single company of Southern California capitalists. After a thorough investigation as to climatic and soil conditions, these capitalists planted thousands of acres of foothill lands to citrus trees. When these groves reach maturity, oranges will be one of the chief fruits shipped out of the county. Oranges have been grown in small groves for a quarter of a century, but it was only recently that planting has been done on an extensive scale. Colusa oranges ripen in the latter part of October and in November.

Transportation facilities in Colusa are excellent. The main line of the Southern Pacific Company traverses the county from north to south, affording direct passenger and freight service with Sacramento and San Francisco. The Southern Pacific also operates a branch line through the rich sections that are not served by the main line. The Northern Electric operates a branch electric line from Marysville, in Yuba County, to Colusa. This line makes connections at Marysville for all points on the east side of the Sacramento Valley. Cheap water transportation on the Sacramento River is available for all non-perishable products. The new west side electric road, which at this writing is in course of construction, will pass through Colusa County, giving transportation facilities to sections not before served by a road.

There has been a marked growth in Colusa County during recent years. This has been due in a large measure to the fact that the great grain ranches of former years are gradually being subdivided and sold in small tracts to new settlers. Irrigation has also played an important part in the development of the lands of the county, and cheap electric power has been a factor in irrigation development.

While the county is not noted for its mineral production, still, it possesses some valuable mineral lands. The foothills of the Coast Range yield a blue sand stone, which is valuable for building purposes. Mineral springs, from which flow waters valued for their curative powers, are numerous in the higher foothill sections.

Colusa, a pretty little city of 3,000 inhabitants, is the seat of the county government. It has good schools and churches and excellent business and county buildings. Other leading towns, which are centers of farming districts, are Maxwell, Williams, Arbuckle, College City and Princeton.



BEAUTIFUL LAKE TAHOE AND LUMBERING SCENE, EL DORADO COUNTY.

L DORADO COUNTY

From a historical standpoint, El Dorado will always be one of the most interesting counties of California, for it was here that James Marshall discovered gold in a mill race at Coloma on the American River in 1848, and for the first time directed the attention of the

world to this land of wonderful resources. In the early days of California's history, El Dorado was the scene of many deeds which have been vividly pictured by some of the best writers of American literature. One of the main overland roads across which the pioneers came upon entering California in their ox teams from the East, leads directly to Placerville, the county seat, in the early days known as Hangtown, which was one of the liveliest of all mining towns in the '50s.

But it is not from historical interest alone that El Dorado is attracting attention to-day. The county is exceedingly resourceful and offers just as good or better opportunities to settlers in 1915 as it did to fortune hunters in '49. The principal industries of the county are mining, fruit raising, lumbering, stock raising and general farming. In all of these branches of endeavor there are excellent opportunities for development, as land is to be had for a reasonable price in El Dorado and there is abundance of water for irrigation. For certain products soil and climatic conditions are unexcelled and the husbandman who plants Bartlett pears, plums, prunes, apples, peaches, olives and walnuts is sure of success. Oranges are grown in the western part of the county. All of these fruits have been tried and found profitable year after year for the grower. The Bartlett pear grown in El Dorado County cannot be excelled. Prices realized in Eastern markets for all El Dorado fruits are the very highest. This county was the first to adopt the standard pack, which assures quality of the first class to the purchaser.

Being a foothill and mountain county, the products of El Dorado do not ripen as early as those in the counties in lower altitudes on the floor of the Sacramento Valley. This fact is not a disadvantage, as it might at first seem, but a decided advantage to the El Dorado grower, because his fruits come upon the market after the valley crops of the same varieties have been harvested and marketed. Hence, the mountain products do not meet with competition.

Unimproved land in El Dorado County can be purchased for from \$20 to \$80 an acre. In most cases it is covered with a growth of timber, which has to be cut before cultivation can be started. This in most cases does not add to the cost of the land, as the cut timber can be sold and it pays a large portion of the cost of clearing. The soil is rich sandy loam and decomposed lava, a gray volcanic rock. Most of the soils are formed by the disintegration of slate and allied rocks. They are deep and well drained and readily retain moisture.

There is abundance of water for irrigation in El Dorado, derived from the American River on the north and the Cosumnes and its tributaries on the south. These streams rise in the higher altitudes of the mountains and flow in a general westerly direction through deep canyons to the valley lands below. Not only do they supply water for



PEAR ORCHARD AND CATTLE SCENE, EL DORADO COUNTY.

domestic purposes to towns and cities and for irrigation to money-making farms, but they offer unlimited opportunities for electric power development. There are now several power plants in El Dorado, where electricity for many uses is generated.

Since early days the mining industry has been one of great importance in El Dorado and it will probably continue so for many generations to come. The county lies on the "mother lode" or rich ore vein which extends through several counties on the western slope of the Sierra Nevada Mountains. In the first few years following the discovery of gold, all the streams of the county were "worked over" with the sluice and rocker, the crude method followed by the pioneers in seeking gold. Later, deep mining on modern scientific lines was introduced and is now followed. El Dorado County has produced upwards of \$150,000,000 in gold from gravel alone and the source of this supply lying in the higher regions northeast and southeast of Placerville, has as yet been only partially explored.

The precious metal is not the only mineral product of the county. There are large deposits of slate, granite, lime, asbestos and other building stones and some diamonds have been found.

The lumbering industry of El Dorado gives employment to hundreds of workmen and distributes thousands of dollars in wages annually. The trees cut for commercial purposes are coniferous and the wood is soft. The most important kinds are the sugar and the yellow pine, the Douglas spruce, the cedar and two varieties of fir.

There are several large lumber mills in the county. One of these is located at Pino Grand, 25 miles northeast of Placerville, and is reached by a narrow gauge railroad from Camino. At Camino are situated the lumber yards and box factory of the company.

The California Door Company's mill is located at Calder and is reached by a narrow gauge railroad from Diamond Springs, with the lumber yards at the latter place.

El Dorado is also a resort county. Some of the most popular Summer resorts in California are found within its borders. This is particularly true of the higher altitudes of the Sierra Nevadas, where lakes and streams are numerous and fish and game are plentiful. El Dorado County, it should be added, extends over the summit of the Sierra Nevada Mountains to the boundary line of Nevada. It is approximately seventy miles long and thirty-five miles wide. About two-thirds of the total area of Lake Tahoe, one of the most celebrated mountain lakes in the world, and a spot that delights thousands of pleasure seekers during the Summer months, lies in El Dorado County. Trout of many varieties abound in the mountain streams, and game, such as bear, deer, rabbit, grouse and mountain quail, is plentiful.

The State Highway, which will be the Lincoln Highway, leads from Sacramento to Lake Tahoe and passes through the full length of El Dorado County from west to east. This is one of the famous scenic highways of California. Delightful resorts are numerous along this road, which follows the course of the south fork of the American River. Good trout fishing is to be had at almost any point in this stream.

The county seat of El Dorado is Placerville. It is a progressive city with good schools, the county high school being located there.

The average rainfall of the county is from 40 to 60 inches.



HARVESTING A RICH CROP OF ALMONDS IN GLENN COUNTY.



LENN COUNTY

Glenn County lies in the west central portion of the Sacramento Valley. Its eastern boundary for the most part is the Sacramento River, and its western line extends into the Coast Range Mountains. It is about thirty miles wide with an average length of about fifty

miles, and contains one million acres of land.

The eastern half of the county lies in the valley proper and is level and adapted to farming of all kinds. About midway between the eastern and western boundaries, the land becomes broken by low rolling hills, which increase in altitude as they near the western line, until they become the Coast Range Mountains. The foothill and rolling land is adapted to grain and fruit growing, much of it being cropped. In the higher altitudes there is a great area of fine grazing land, also numerous small valleys, which are exceedingly productive. The mountains are clothed with forests of merchantable timber.

The county has undergone rapid development during the past ten years. Great farms of 10,000 acres or more, which were formerly cropped only to grain have been and are now being subdivided and sold in small tracts to newcomers. Thousands of new families have settled in the county and new methods of farming and new crops have been introduced. Irrigation has been practiced and has wrought wonderful changes. Alfalfa has to a large extent taken the place of grain, and dairying and stock raising have become important and profitable industries.

One of the most successful irrigation projects ever carried to completion under the supervision of the United States Reclamation Service, is in Glenn County. This is the Orland Project which will irrigate 21,000 acres of land near Orland, a rich section in the northern part of the county. The system was built and is now managed by the United States Government. Eventually it will belong to the land owners benefited, as they are paying the government the cost of construction in ten equal yearly payments. Under the law governing the project no land owner can hold more than 160 acres within the project. Wonderful prosperity has followed the completion of this system. The water is taken from Stony Creek, a tributary of the Sacramento River.

Thousands of acres in Glenn are irrigated by the Sacramento Valley Irrigation Company, which takes water from the Sacramento River and conveys it by canals to the fertile farms, consisting of about 200,000 acres. Deep well irrigation is also followed, there being an abundant subterranean supply.

Artesian water has been developed at Germantown in great quantities at a distance of about 500 or 600 feet, which adds materially to the irrigation of the uplands.

In former years Glenn was noted for its great yields of barley and wheat. While it still produces quantities of these important grains, much of its best land has recently been planted to other and more profitable crops. The planting of fruit trees has been particularly heavy during the past few years. These new orchards include all varieties of deciduous and citrus fruits and nuts. Indeed, Glenn County has been



WATER IN WONDERFUL ABUNDANCE FOR IRRIGATION FOR GLENN COUNTY.

selected by the James Mills Orchard Company for a plantation of 10,000 acres devoted exclusively to citrus fruits. The planting of this orchard has been under way for several seasons and when it is completed, it will be the largest citrus fruit grove in the world. The deciduous fruits produced include all the standard profitable varieties of the Sacramento Valley, which are the apricot, cherry, peach, plum, prune, pear and grape. Berries of all kinds are also grown, and as stated in a preceding paragraph, alfalfa is an important crop. It is one of the best crops to engage the attention of a newcomer.

The production of sugar beets has been found profitable in Glenn. There is a large sugar factory at Hamilton, in the northern part of the county and it is supplied with beets grown in this and neighboring counties. Beets produce heavily on the river lands and on the uplands when irrigated.

Broom corn is another crop that is grown extensively along the river lands. It yields about 100,000 pounds to the acre and pays well.

Glenn is also one of the counties of the Sacramento Valley that has land within its borders suited to the culture of rice. Rice has been grown successfully here for several seasons.

English walnuts and almonds are both paying crops and there is a large acreage in the county suited to the successful culture of the olive.

Stock raisers and poultry raisers find unsurpassed natural conditions here. In the northern part of the county there are many farms devoted exclusively to the production of turkeys.

Vegetables of practically all kinds are produced and find ready markets in the large California cities.

Glenn has excellent rail and water transportation facilities. The main line of the Southern Pacific Company passes through the county from north to south and a branch road serves the river districts of the county. The West Side Electric Line, which is now being built, will pass through the county. The Sacramento River, which separates Glenn from Butte, is navigable the year round.

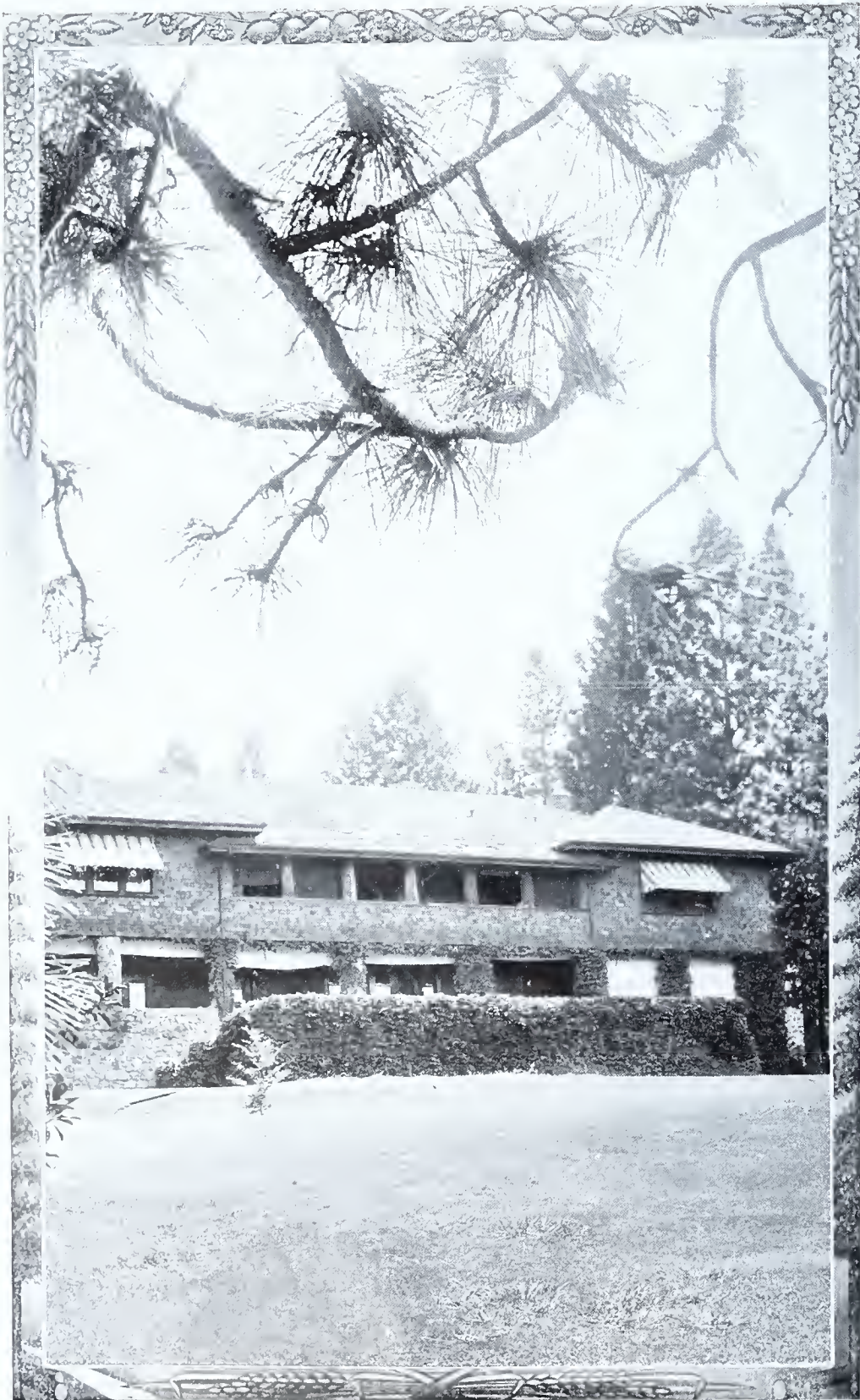
The principal city and county seat is Willows, a growing community situated near the geographical center of the county on the main line of the Southern Pacific Company. Willows is lighted by electricity, has a good water and sewer system. It has good business buildings and large stores. One of the county's high schools is located here.

Orland is another growing community in the northern part of the county. It is in the center of the Orland irrigation project, previously mentioned. It is out of the frost belt and noted for its almonds and a rapidly growing and profitable citrus industry.

Hamilton is on the Southern Pacific branch road. It is in the center of the beet growing districts and is the location of a large sugar factory.

Germantown is in the center of a rich farming district in the valley section of the county. Other important towns are Butte City, on the Sacramento River, Elk Creek, in the foothills, and Norman, on the Southern Pacific Railroad.

Glenn offers excellent opportunities for new settlers. Land is cheap, when its productive capacity is taken into consideration, and water for irrigation is abundant.



RURAL HOME SCENE, NEVADA COUNTY.



NEVADA COUNTY

By J. E. TAYLOR

From a county formerly given over almost entirely to mining, lumbering and their allied industries, Nevada County has leaped within the last five years into prominence as a horticultural and agricultural county.

Being of the foothills, its claims were at first considered rather presumptuous, but repeated successes at the California State Fair, apple carnivals and land shows have proved conclusively that it has the product to back up every claim made.

The county is the natural home of the Bartlett pear, that delicious food product which takes rank with the orange, the peach and the cantaloupe as an universal shipper. Like the orange, the Bartlett has its favorite belts, comparatively small and restricted, outside of which it does not attain its fullest perfection. The proven Bartlett belt of Northern California includes a large portion of the area of Nevada County. It is grown there both with and without irrigation, with practically equal success as to financial returns. Large areas adapted to its culture are still unreclaimed from their timbered state and may be had at a low first-cost price.

The county has a remarkable variety of climate and elevation, its length of 80 miles stretching from the Sacramento Valley, with an elevation of 500 feet to the crest of the Sierra Nevada Mountains, with an elevation of 6000 feet, and on to the Nevada State line. Since the earliest settlements it has been a producer of the things which go to increase the sum of the world's wealth. Since 1848 its stream of virgin gold has never ceased to flow until it now aggregates over three hundred million dollars. Quartz mines discovered in the early fifties are still producing, an almost unheard of circumstance in gold mining. During the year 1913 the quartz mines of the Grass Valley and Nevada City districts yielded, according to records kept by the government, \$2,918,733, thus placing the county in the lead of all California counties as a gold producer.

Since these mines are all large corporate concerns, involving vast capital, the small investor may conclude that they are of no concern to him. It should be remembered, however, that in order to produce the nearly three million dollars in gold the services of over 1500 men were constantly required, their wages aggregating in excess of \$125,000 monthly. This army of men connected directly and indirectly with the mines, forms an insistent consuming population.

Aside from the big mines of the Grass Valley and Nevada City districts, there are scores of smaller mines now producing, or which have produced, and within the county there is still a fertile field for the prospector and the small mining investor. The Rough and Ready, Washington, Graniteville and the great San Juan Ridge section, famous for yields of gold in the old hydraulic days, are open ranges for men skilled in the search for precious metals.

Passing into the "upper country," varied industries present themselves, the most notable being the power, water and lumbering enterprises. Three large power companies operate there and at one point,



YOUNG PEAR ORCHARD IN NEVADA COUNTY.

Lake Spaulding, one of the largest dams in America, has been constructed for the development of electric energy, which finds its market at points hundreds of miles distant. At Hobart Mills, in the extreme east end, large lumber mills are maintained, while at Floriston are found immense factories for the manufacture of paper from wood pulp. At Truckee, a town of 1700 population, the Southern Pacific Railway carries on divisional activities. It is also the center of a large tourist section and abounds in excellent hunting and fishing.

Special mention has been made of the Bartlett pear, but from this it should not be inferred that the soil of Nevada County is not equally well adapted to the production of other fruits. The list includes about everything which grows on trees outside of tropical regions—apples, peaches, plums, cherries, prunes, quinees, walnuts, almonds, and of the vine, grapes in great variety. Of the small fruits, there is an equally long list.

But here is the wonder of Nevada County—the lower portion is well within the famous citrus fruit belt of Northern California. To harvest oranges and olives coincident with ice is, indeed, strange, but it takes place within this small civil division every year. The culture of oranges and olives, too, is not merely a garden fad. In the lower end of the county there are several fine groves of citrus fruits and the number are rapidly increasing. Oranges grown there are pronounced perfect by experts from Los Angeles. Orange and olive lands, unreclaimed, can still be purchased at prices extremely low.

The citrus fruit area of Nevada County has been estimated at 100,000 acres, a small region as compared with the deciduous area, which extends through the foothills well into the mountains. It is here that, perhaps, the greatest opportunities lie for the homeseeker. These lands are cheap, irrigation is optional and it is possible for an industrious family to live comfortably while an orchard tract is being reclaimed from its timbered state and brought into bearing. Bearing orchards also are for sale at prices well within the reach of the ordinary investor.

In order to help the homeseeker and develop the resources of the county as rapidly as possible, a cannery has been established at Grass Valley. During the season of 1914, this institution paid out about \$12,000 for fruits and vegetables and \$6,000 in wages. Its pack comprised 6,600 cases, or nearly 200,000 cans of food products. The cannery is owned by the farmers and business men of the county.

Two years ago a party of farm experts from the State University Farm selected land in this county for the establishment of a model farm, it being determined after wide search that conditions of soil, climate and altitude here were most nearly suited to the enterprise which they hoped to develop.

In social features, Nevada County compares favorably with other counties of the State—schools, churches, libraries, railway facilities, good roads, mail delivery and telephones.

Of the cities, Nevada City and Grass Valley, connected by electric railway, are the largest. Nevada City is the seat of government. Chambers of Commerce in each, together with the Nevada County Development Committee, are engaged in the work of developing latent resources.



TYPICAL ORANGE GROVE IN FULL BEARING, PLACER COUNTY.



PLACER COUNTY

Valley, foothill and mountain lands are found within the confines of Placer County. The county extends from the floor of the Sacramento Valley across the Sierra Nevada Mountains to the western boundary line of the State of Nevada.

Its general direction is northeast and southwest; it is about 100 miles long and varies in width from ten to thirty miles, this being determined by the course of rivers that mark its northern and southern boundaries.

The total area of the county is 1,395 square miles, of which 810 square miles are mountains, 450 foothills and the remainder valley lands. The altitude ranges from 40 feet above sea level in the Sacramento Valley to 8,000 or more at the summit of the mountains. From an elevation of 2,500 feet to the summit of the Sierras snow falls in winter, increasing in depth as the altitude becomes greater.

Placer is one of the most noted fruit producing counties in California. The fruit belt extends from the western boundary lines to Colfax and a considerable distance beyond. In this belt is produced practically every horticultural product known to the temperate zones. The list includes oranges, lemons, limes, pomellos, peaches, plums, prunes, cherries, apricots, pears, persimmons, neectarines, loquats, grapes, figs, olives, almonds, walnuts, apples, etc.

Roseville, Rocklin, Loomis, Penryn, Newcastle, Auburn, Lincoln, Bowman, Applegate, Weinmar, Colfax, Dutch Flat and Towle are all important fruit shipping points during the fruit season. In the lower altitudes of the fruit belt the principal horticultural products are oranges, peaches, plums, cherries, pears and grapes. In the higher altitudes fine winter apples are raised, also Hungarian prunes and Bartlett pears that are the equal of any.

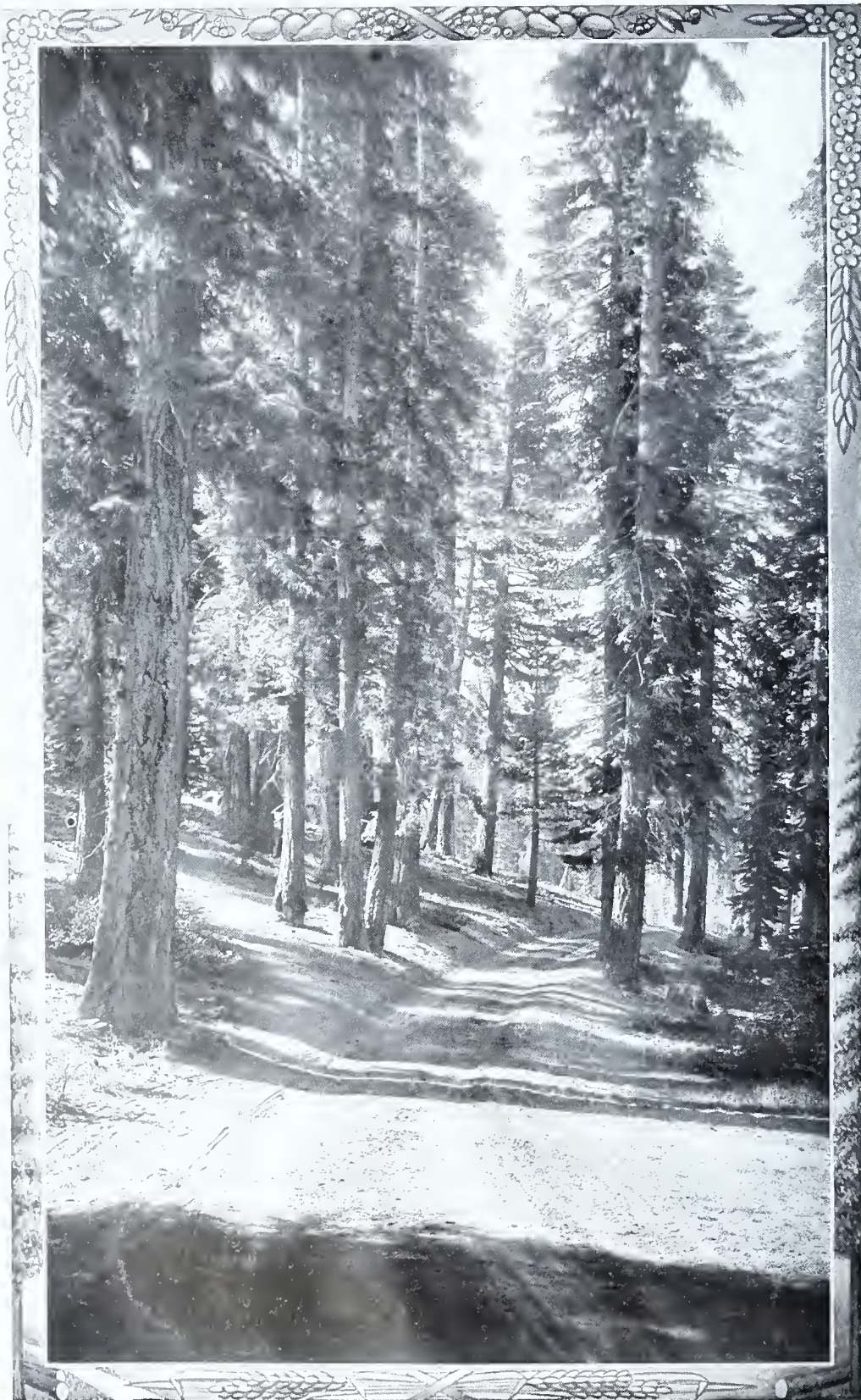
The soil of the western portion of the county is of alluvial composition, as is all the soil in the Sacramento Valley, and is very productive. In the foothills the prevailing soil is a decomposed granite, rich in all essentials for plant production.

Placer County orchardists are prosperous and contented. Some of the prettiest farms in the State are to found here. Most of the product is shipped to Eastern markets in earload lots. Several thousand cars are shipped annually.

As in all counties whose boundaries extend into the heart of the Sierra Nevada Mountains, lumbering is an industry of considerable importance in Placer County. The sugar pine, yellow pine, fir and cedar are the commercial trees that compose the great forests on the divides. There are several large lumber mills in operation, and there is a wealth of uncut timber on the mountain plateaus.

Placer is rich in minerals. Its gold production since 1849 is estimated at more than \$75,000,000. Several large drift mines are now in operation and they are among the largest in California. There are great bodies of gold, copper and iron ore, and valuable deposits of asbestos, lime, clay, and other useful minerals.

In the vicinity of Lincoln are great deposits of potter's clay, and



MOUNTAIN ROAD TO TAHOE, PLACER COUNTY.

one of the leading industries of the county is the manufacture of pottery. At Rocklin are quarries that produce granite that ranks with the best in the United States as a building material.

Placer County is well watered, its northern and southern boundaries being mountain streams fed by numerous tributaries that rise within the confines of the county. These streams furnish water for three purposes—domestic use for cities, irrigation and power development. For the generation of electric energy by water power, Placer is in the very front rank of the counties of California. A great electrical development and irrigation project has just been completed in the higher altitudes of Placer County. By the construction of great dams an immense quantity of water has been impounded. This water is used to turn the wheels of generators to create electricity for lights and power in the cities of Sacramento, Oakland, San Francisco and elsewhere, and after it passes through the power houses, it is again taken from the streams and conveyed in canals to the foothill and valley farms, where it is used to irrigate the growing crops. There is an abundance of water for irrigation in every part of this rich and resourceful county.

Placer County is sometimes spoken of as the gateway to the Sacramento Valley. The appellation is not inappropriate, as the county is the first through which the tourist passes while en route to California from the East over the lines of the Southern Pacific Railroad. The visitor's first glimpse of California is of the rugged Sierra Nevada Mountains with their deep canyons, timbered plateaus and snow-capped peaks. As the train winds down from the mountain, the visitor next sees the pretty foothill orchards and finally the fertile valley lands.

The mountain scenery of Placer County is magnificent. From the peaks are presented views as awe-inspiring as can be seen from the world famous Alps. Lake Tahoe lies partly in Placer County, and many of the resorts on the shores of that magnificent body of water are in this county. Mountain streams and lakes are numerous and here the gamey trout awaits the skillful angler's fly. This is also a huntsman's paradise. Grouse, valley and mountain quail, doves, wild pigeon and deer are found, and for those who wish to test their skill and courage against big game, bear and California lion are to be had by penetrating into the depths of the mountains.

The freight terminal of the Southern Pacific Company is located at Roseville, where the eastern and northern main lines of the railroad converge. A pre-cooling and icing plant, by which deciduous fruit is cooled and iced before being shipped East, is located here.

Near Loomis, the United States Government maintains an experimental station for fig raising, which promises to become an important industry in California within a few years. Figs grow readily in California and begin to bear the second year, producing an abundant crop by the fifth year.

The county seat is Auburn, situated in the heart of the foothills. It is a delightful little city surrounded by thriving orchards.

The climate of the foothill section of Placer County is delightful at all seasons of the year, and the air being laden with a balsamic ozone is a tonic to those with weak heart or lungs.



HARVESTING ALFALFA HAY IN THE FERTILE MOHAWK VALLEY, PLUMAS COUNTY.



PLUMAS COUNTY

Plumas is a mountain county, and is noted for its mines, forests, productive valleys and scenic beauties. Its entire area lies on the slopes of the Sierra Nevada Mountains, its lowest elevation being about 1,800 feet and its highest peaks reaching an altitude of 10,000 feet. Drained and irrigated by the waters of many rivers, the valleys which lie between the mountain ridges are wide sweeps of fertile land, where soil and climatic conditions are the best for dairying, stock raising and culture of hardy fruits. Nearly all of the land of these valleys is under cultivation. Uncleared land sells for from \$25 to \$40 per acre and cleared land from \$40 to \$75, the price varying according to location, water rights and quality of the soil.

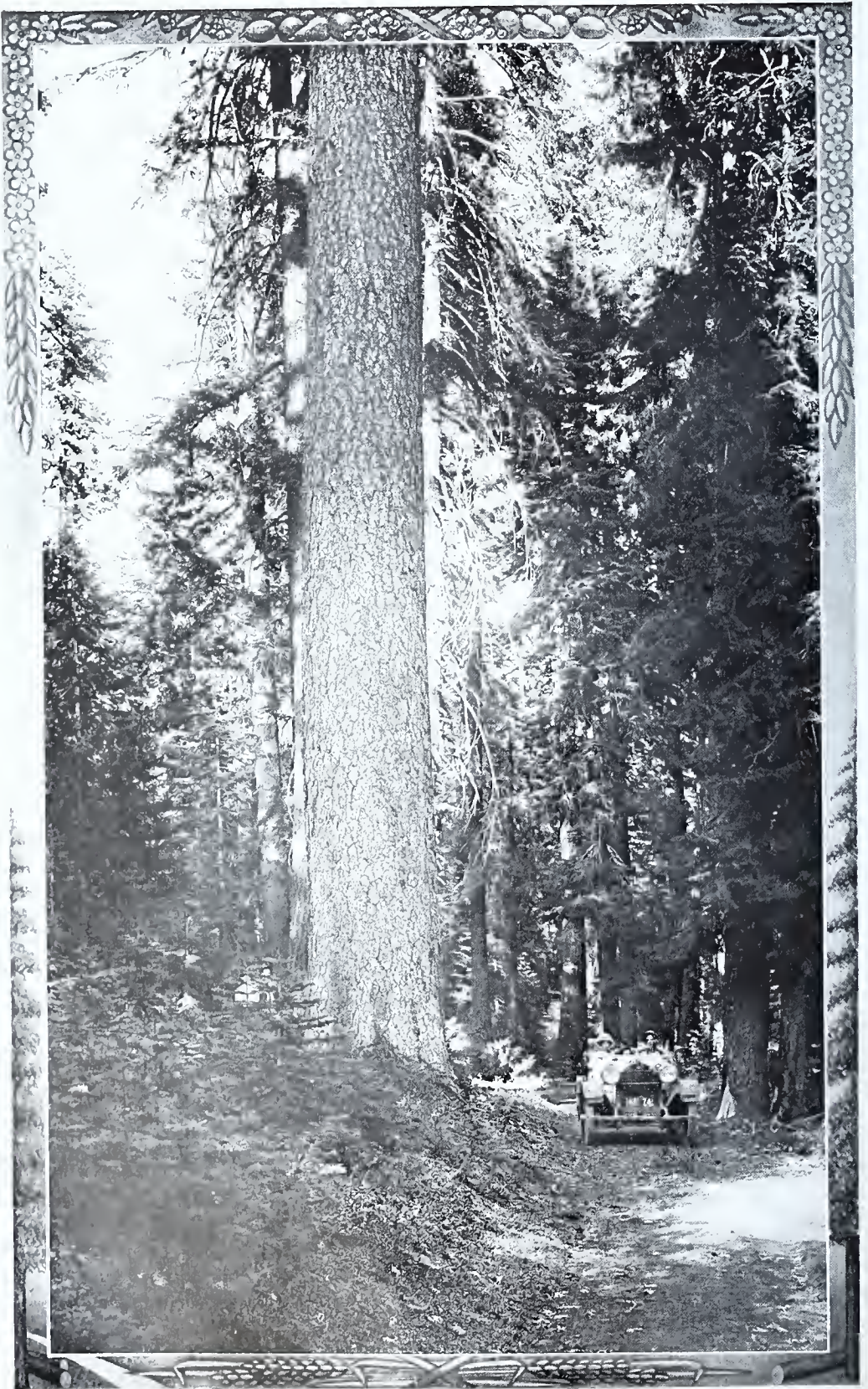
The most important of these valleys are Indian, Sierra, Mohawk, American, Big Meadows, Genesee, Humbug, Meadow, Butt, Warner, Grizzly, Lone Rock, Red Clover, Buck's, Spring Garden and Last Chance. The total valley area of the county is 191,240 acres. All of these fertile nooks produce immense crops of grain and hay and hardy fruits and vegetables.

A big factor in the development of Plumas County is its mineral wealth. Running through many of its mountain ridges are ancient river channels whose gravel beds hold vast stores of gold. Millions of dollars have already been taken from the Plumas Mines, and those who have studied the mineral production of the county say that the extraction of the precious metal will continue for many years to come. There has been much surface mining done in Plumas in times past and there still remains opportunities for this kind of gold hunting.

The Plumas-Eureka and Jamison mines are rich quartz properties and are noted as the best gold producers in the vicinity. The Jamison has been worked for about seventeen years and the Plumas-Eureka, one of the oldest mines in the county, which was allowed to remain idle for many years, was reopened several years ago and operated by modern methods. Other noted producers are the Dunn Mine, near Seneca, the Stauffer at Long Valley, the McGill and Stannart, the New York, the Indian Valley, the McClellan, the Southern Eureka, the Cherokee, the Arcadia, and the Wolf Creek quartz mines near Greenville; the Green Mountain and the Crescent quartz mines at Crescent Mills; the Gruss Mine at Genesee; the Gopher Hill and the Bean Hill, near Spanish Ranch, and the Bellevue near La Porte.

Plumas County has all of the necessities required for successful mining. It has quantities of timber and an unlimited supply of water for power and other purposes. The Western Pacific, transcontinental, which crosses the Sierra Nevada Mountains in Plumas County, affords excellent transportation facilities.

The country is practically one entire sweep of forest from one end to the other. While the greater part of this is now embraced in a National Forest Reserve, yet large quantities of the timber on it had been patented prior to the establishment of the Reserve, and many sawmills throughout the mountains turn out millions of feet of sugar pine, yellow pine, spruce and cedar lumber annually. The lumber is of



A GIANT OF THE FOREST NEAR LA PORTE, PLUMAS COUNTY.

excellent quality and is shipped to all parts of the United States. It has even been exported to the Orient and to England for ornamental purposes. An estimate of the amount of timber cut in the county per year is fifty million feet.

The magnitude of the power contained in the water supply of Plumas County can hardly be estimated. The county is crossed by the North and Middle Forks of the beautiful Feather River and their numerous branches and hundreds of other mountain streams that are fed the entire year around by the perennial snows on the mountain peaks. There are throughout the county numerous mountain lakes, which are natural storage reservoirs, which await capital and science to develop great irrigation and power projects. There are already several great power plants in Plumas, but they are insignificant in comparison with the great potential energy that the county's streams will some day produce.

The climate of Plumas County is delightful. In Summer the temperature rarely goes above 95 degrees and the warm days are followed by cool evenings. While snow falls in the higher altitudes in December, January, February and March, the lower valleys have little or no snow. Frosts appear in the early Spring and late Fall. The climate is invigorating and healthful.

Quincy is the county seat of Plumas County. It is a beautiful little town in the American Valley, surrounded by snowclad mountain peaks. It is connected with the Western Pacific Railroad, a transcontinental line, by a branch railway, known as the Quincy Western, built by the citizens of Quincy. The city is electric lighted and has a good water and sewer system.

Keddie is eight miles northeast of Quincy on the Western Pacific Railroad. It is the shipping point for Indian Valley, one of the leading grain producing sections of the county.

Beckwith, near the lower end of Sierra Valley, is on the Boca & Loyalton, Sierra Valley, and Western Pacific Railroads. It is the supply and shipping point for a large timber, mining and farming country.

Portola, Greenville, Taylorsville and Crescent Mills are other towns of importance in Plumas County.

Plumas County is noted for its beautiful scenery. The Feather River Canyon, through which the Western Pacific Railroad passes, is famed for its scenic grandeur. Summer resorts are numerous at different points along the canyon and are alive with activity during the months of June, July, August and September. Campers from the valley counties find all parts of Plumas County a delight in Summer. Trout and white fish are plentiful in all the streams and lakes, and deer, bear, grouse and mountain quail lure the sportsman to the thicket.

Mountain springs providing healthful mineral waters are numerous throughout Plumas, the most noted being at Longville, in Humbug Valley, at Chipp's Creek, Twain, Soda Bar and Arlington. There are warm springs near Greenville and warm and cold sulphur springs at the Sulphur Spring Ranch.

There are numerous mountain resorts in the county where hundreds of valley residents enjoy delightful outings during the Summer months.



GEMS OF BEAUTY AND UTILITY ABOUND IN SHASTA COUNTY.



SHASTA COUNTY

By M. E. DITTMAR, Redding, California

The best foundation for communal prosperity is diversity of resource. A diversity of soil and climate assure a variety of agricultural, horticultural and pomological products. A diversity of industrial raw materials and forest resources invites industrial expansion. When a community embraces these, with a superabundance of water for power and irrigation, it offers a combination of advantages, rarely equalled and never excelled. These are the advantages that Shasta County at the extreme head of the Sacramento Valley possesses.

In area Shasta is the largest geographical subdivision in the Sacramento River drainage, embracing 4,050 square miles within its borders—the States of Rhode Island and Delaware could be included in this area and leave a surplus of over 750 square miles.

The increasing importance of irrigation as an aid to intensive agriculture, speeding up the soil, is generally recognized. As compared with dry farming and cereal crops exclusively, intensive agriculture, fruitgrowing and diversified husbandry, has increased the annual net profit from the soil many fold. In the last analysis, water on the land is as a rule more valuable than the land itself.

According to official daily gauging records, the average annual run-off, originating within the limits of Shasta County, is 8,100,000 acre feet—a valuable irrigation and power asset.

Over one-sixth of the potential water-power energy of California exists within the border of Shasta County. The development of cheap and convenient power means industrial development. Water, for power and for irrigation, is the "open sesame" of Shasta's future.

To utilize the power, Shasta has industrial raw materials to attract giants of capital and industry. The industrial metals, copper, iron and zinc, already highly developed and of the first magnitude in quantity; cement materials and great beds of fine quality clays; the elements essential for the manufacture of commercial fertilizers, on a scale to supply the greater part of the North American continent with calcium nitrates—destined to entirely supersede the sodium nitrates of Chile; hardwood timber for the manufacture of furniture, and vast forests of commercial pine and fir for the lumberman—containing over 5,250,000,000 feet (board measure) standing commercial timber.

These resources represent the foundation for an industrial community that cannot be equalled for diversity, quantity and general advantages, within a like area anywhere in the United States.

In metal mining, Shasta has been in a class by itself, leading all other counties in California for the past eighteen years. The official statistics from 1897—the year when her great sulphide ore bodies were first exploited—to 1914 (last year estimated) credit the county with a total output of \$99,144,777, or an average of over \$5,508,000 per year.

More than two thousand men find employment at good wages, all the year round, in this great industry, and approximately \$3,000,000 per annum are paid out within the borders of the county for wages and supplies.

The great industrial metal, copper, is next to iron in importance, in the work of the world. In the past eighteen years Shasta has produced 488,211,278 pounds of this metal.

To Shasta County is due the credit of the first important development on the Pacific Coast, in the production of iron ore, and the manufacture of pigiron by means of the electric furnace.

The electric furnaces at Heroult have also been utilized in the manufacture of ferro-manganese, for the steel plants of the eastern portion of the United States. Here are grouped the iron ores, the elements essential in the manufacture of special steel, and a million horsepower of potential energy—the basis for the upbuilding of another Pittsburgh.

In emphasizing the industrial present and future of Shasta County, we wish to make its importance apparent from the "home market" viewpoint, with thousands of consumers finding remunerative and continuous occupation the producer has an advantage not frequently enjoyed, and this is particularly true where intensive cultivation is practiced, on smaller land holdings.

Deciduous fruit is grown on an extensive scale in the lower valleys and foothills. The culture of the prune is predominant, with peaches and pears a close second.

The olive, one of the most stable orchard products, has demonstrated its superiority in Shasta County. Hundreds of contiguous acres are now planted to olive groves, and one of the largest groves in the State, containing 120 acres, planted more than twenty years ago, is also one of the most prolific in the State.

The vine, in these higher but still semi-tropic latitudes, during the long sunny summer days, stores larger percentages of sugar in the grape—an advantage that will appeal to the viticulturist.

No climatic reason exists why oranges should not be grown successfully, as the isothermal zone of the Central California valleys extends to the vicinity of Redding. Trees a score of years old or more, planted chiefly for ornamental purposes, attest the feasibility of citrus culture.

Cereals of all kinds are grown in the main valley—especially in the Churn Creek Bottoms—and in the mountain valleys of northeastern Shasta. A greater area is being devoted from year to year, to alfalfa, with the increase of irrigation—although three crops are usually cut without irrigation—and dairying and stock-raising are on the increase.

The stock-grower, except where stock is wintered in the higher altitudes, does little winter feeding, utilizing instead a combination of summer and winter range, made possible by the varying altitudes and the vast acreage of public domain in the forest reserves.

Shasta County contains a number of thriving cities and towns. Redding is the county seat, a beautifully located city of about four thousand people, at the extreme head of the Sacramento Valley, where mountain and vale meet. It is the natural distributing center for a large area of Northern California, the center of industrial development, with large and prosperous business houses, excellent hotels, etc., up-to-date schools including the Shasta County high school, churches of various denominations, and all the more prominent fraternal organizations.

The thriving towns of Anderson and Cottonwood are the chief

fruit centers of Shasta, and thousands of tons of fruit, as well as agricultural products and livestock, are shipped annually from these points.

Kennett is the center of smelting activity, and is an important industrial city of over two thousand people.

Other towns of importance are Fall River and McArthur, in north-eastern Shasta; Castella, La Moine and Delta, in the Sacramento Canyon; De Lamar, French Gulch, the old pioneer county seat of Shasta, Coram and Keswick, in the mining districts; Millville and Ono represent smaller agricultural and stock-raising communities.

The County is traversed by many good roads, and the streams are bridged with creditable permanent structures. The California State Highway is under construction, through the heart of Shasta, and State Highway laterals, into Trinity County to the west, connecting with the main trunk road at Redding, have been provided for.

Shasta has excellent main line railroad facilities, with expansion in feeders and other main line construction assured in the near future.

The beautiful in nature is blended with the utilitarian, in Shasta County. In the Sacramento Canyon, enchanting vistas of Mount Shasta and the stately domes and spires of the Castle Crags offer an ever-changing panorama of indescribable grandeur, through verdant mountain recesses cut by the crystal river.

The beautiful McCloud in all its pristine glory, where the gamey trout abounds, and the timid doe or stately buck emerge from their leafy lanes along the river's brink or mountain glades. The rugged gorges of the Pit, where majesty and power impress the visitor. Beautiful Burney, the misty mistic falls that tumble over lava cliffs a hundred feet and more, to greet the onrush of the river—all these inspire.

But nature, not content with her lavish bestowal of the majestic and beautiful, assays a new wonder—the awe-inspiring eruption of Mount Lassen. In a region of fantastic natural features, the mountain long quiescent now holds the center of the stage. Unique, as the only active crater in continental United States—remote from centers of population, that the release of its pent-up energies may fall harmless—it presents a spectacular climax in its periodical eruptions, forcing a mighty column of steam and volcanic ejecta, two miles and more in the air. This is Shasta's exclusive wonder, though visible for a hundred miles, and Congress recognizes its attractive powers by proposing to establish here the Lassen Volcanic National Park. The Lassen Trail Highway to Manzanita Lake, five miles from the crater summit, presents a route of easy access for the automobilist. The nature lover will find the lure of Shasta's natural wonders an inspirational revelation.

The development of the manifold resources of Shasta County assures her a great future—

The door of opportunity stands ajar.

Industrial opportunity for capital.

Land at reasonable prices for the home-seeker.

Delightful climate, and magnificent scenery.

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GARDEN TRUCK AND ORCHARD SCENE, SOLANO COUNTY.



SOLANO COUNTY

Solano County is the western gateway to the Sacramento Valley. Its southwestern extremity borders on the bay region and hence it has many miles of deep water front. Its area is 822 square miles, consisting of foothill and plain lands.

Solano County commands attention both as an industrial and as a farming community. Thousands of cattle, sheep and horses fatten on its foothill and marsh lands and its industrial establishments pay out fortunes each year to hundreds of happy employees. But it is as a fruit producing county, however, that Solano is probably most widely known. The first deciduous fruits to reach the markets of the United States each year invariably come from Solano County. There are several sequestered valleys which are arms of the main Sacramento Valley, where the finest of cherries, plums, peaches, apricots and pears are produced. Fortunes have been made by the fruit growers in these favored localities.

Equally as productive as the soil in the protected valleys is the bottom land along the Sacramento River, much of which has been reclaimed by the construction of great levees. This land is excellent for all kinds of fruit, vegetables, alfalfa, etc.

Extending across the county from the bottom lands on the east to the foothills on the west, is a rich alluvial plain. This plain is farmed to grain, stock raising, dairying, alfalfa, growing deciduous and citrus fruits, poultry production, etc.

The city of Dixon on the main line of the Southern Pacific Company in the northern part of the county, is a great dairy center and nut producing section. Some of the finest dairy herds in California are located here and the milk and butter produced are sold in the markets around San Francisco Bay. The vicinity of Dixon was formerly a grain producing center, but with the introduction of deep wells for irrigation, alfalfa succeeded grain and the dairy business followed the successful production of alfalfa. Some of the finest ranches in California for the breeding of thoroughbred cattle and sheep are also in the vicinity of Dixon.

In the southern part of the county on what are known as the Montezuma Hills, is produced an enormous wheat crop each year. The wheat is of a choice milling quality. The delta lands bordering the Suisun Bay region offer a green pasture all the year round for thousands of head of stock. This large area is susceptible of wonderful development.

Rail and deep water transportation are available to Solano County. The Southern Pacific Company crosses the county with several lines. The Oakland, Antioch and Eastern electric railway, operating between Sacramento and San Francisco, has opened new territory in the southeastern part of the county. The Sacramento Valley Electric Railroad, in course of construction, when completed will run as far north as Red Bluff, in Tehama County, connects with the Oakland and Antioch a few miles south of Dixon. The first link of this road, operating between Dixon and the main line of the Oakland and Antioch began train service



VINEYARD SCENE AND DAIRY, SOLANO COUNTY.

in October, 1914. The county has an excellent system of improved highways and all streams are crossed by substantial bridges.

The manufacturing centers of the county are at Vallejo and Benicia, which are located in the southwestern part of the county. At Vallejo is the United States Government Mare Island Navy Yard, ranking second in importance of all Government yards, that of New York alone being larger. There are regularly employed 2200 skilled workmen. The improvements and equipment of the plant are valued at \$12,000,000 and no battleship that has yet been planned is too great to be constructed at these yards. The great collier "Jupiter," with a carrying capacity of 12,500 tons of coal and 1,000 tons of fuel oil, was constructed here. The "Jupiter" is 520 feet in length and 65 feet in width. Her net cost was \$1,070,000. Early in 1914 construction was started at the yards of the fuel ship "Kanawha," and when she is completed a sister ship to be known as the "Maumee" is to be built. These boats will be 455 feet long, 56 feet wide, and will have a draft of 26 feet, 4 inches.

Vallejo is a pretty city with many beautiful homes. It has a large business section, two banks, paved streets, public library, good water supply, city hall, fire department, sewer system, several newspapers and ten churches.

Benicia is a well located manufacturing town, having many miles of deep water front. It boasts several large industrial plants.

The county seat of Solano County is Fairfield, which is a sister city of Suisun. A magnificent court house, which was recently completed, is one of the features of Fairfield. Suisun-Fairfield has two banks, good hotels, excellent transportation facilities, steam, water and electricity, large packing houses, and is the business center of a large, prosperous community.

An important industry of the county is the manufacture of cement. Five miles northeast of Suisun is a large plant with a capacity of 6,000 barrels daily. The quality of the product is the best, and as there is a great demand for cement in building construction and road work, the plant operates the year round.

Vacaville is a pretty little place in the Vaca Valley, which is one of the rich deciduous fruit sections already referred to. The gross sales of the fruit shipped from Vacaville total more than \$2,500,000 annually. Cherries grown here are usually the first to reach the market.

Rio Vista on the Sacramento River in the southeastern portion of the county, is one of the oldest towns in the State, having been founded prior to the discovery of gold. It is the shipping point for a rich farming district. It is served with excellent river transportation, a number of steamers, both passenger and freight, connecting it with San Francisco and Sacramento daily.

Solano County is fairly representative of the agricultural side of California. Its lands are typical, as are its climate and its industries. It has the great advantage of a river and bay frontage, cheap transportation, nearness to market, and the cooling sea breeze. There are no Winters in the usual sense of the term; the Summers are rainless. Farm work goes on the year round; stock is in the field and fields are green. Some crop is being harvested and marketed every month in the year.



CURING THOMPSON SEEDLESS RAISINS IN THE GOLDEN SUNLIGHT OF SUTTER COUNTY.

UTTER COUNTY

Sutter County lies in the center of the Sacramento Valley on the east bank of the Sacramento River. It is strictly a fruit growing, dairying and general farming community. It is named after General John A. Sutter, the sturdy pioneer, who settled in the Sacramento Valley in 1837. It is one of the smallest but one of the most fertile counties in California. It is an alluvial plain, forty miles long and approximately thirty miles wide, between the Sacramento and Feather Rivers.

The area of the county is 608 square miles. It is all valley land with the exception of a curious formation of rocks and earth that rises from the center of the county to an elevation of about 2,000 feet. These isolated peaks are known as the Sutter Buttes. They cover a base area of 14,000 acres and can be seen from all parts of the Sacramento Valley. The slopes form excellent pasture lands during the Spring months.

The soil is alluvial sandy loam. It is deep and productive of all forms of plant life. The Winters are mild and the Summers pleasant and dry. The rainfall averages from 20 to 30 inches and well water for irrigation may be struck at a depth of from fifteen to twenty-five feet at any place in the county.

These conditions are, of course, ideal for husbandry in all its branches and hence there are a large number of very prosperous farms in Sutter. Along the Feather River for a distance of about thirty miles and extending for several miles back is one of the greatest deciduous fruit belts in the West. Peaches of all varieties reach perfection here. Sutter cling peaches bring the highest prices at the canneries. The fruit is of excellent color, size and flavor.

Sutter is famous as the home of the Thompson Seedless grape. This grape is sweet and delicious when eaten fresh, and when sundried and cured it makes a dainty raisin, which is highly valued as a confection. It grows in huge clusters and produces heavily. The largest vineyard in the world devoted exclusively to Thompson Seedless grapes is in Sutter County.

The prune is also a paying fruit in Sutter. The tree is longer lived than the peach and conditions here for drying the crop are all that could be desired. Rains seldom fall until after the crop has long been harvested and ready for the market. The Bartlett pear is also produced in quantities along the river lands of Sutter. The alluvial soil and climatic conditions favor pear production. The tree matures at six years and bears heavily for several generations.

Figs are grown on many farms and apricots are also a paying crop. There are over 5,000 bearing apricot trees in the county. Olives, oranges and lemons all do well.

Sutter is one of the leading counties in California in almond production, certain localities being exceedingly favorable to the crop. In 1910 there were 61,572 bearing trees in the county and since that date the acreage has steadily increased. The slopes of the Sutter Buttes, where there is excellent air drainage, making the orchards practically immune from frosts, produce heavy crops of almonds annually. Wal-



HARVESTING A BUMPER CROP OF FRUIT IN A PRODUCTIVE ORCHARD OF SUTTER COUNTY.

nuts are also grown and there is excellent opportunity for the extension of this industry.

Sutter is a county of general farming. In addition to fruits, it produces grain, hay and alfalfa. Dairying and stock raising are also followed. Indian and Egyptian corn are grown and fed to hogs. There are a number of private dairies with over one hundred cows each. On the river lands alfalfa produces ten and twelve tons to the acre annually and keeps the meadows green both Winter and Summer.

The river lands of Sutter are wonderfully fertile, and great acreages are planted to beans, sugar beets and kindred crops.

Rice is also grown in this county, there being a large expanse of land suited to the crop.

Quite an area along the Sacramento River is marsh land. This is now being reclaimed by the construction of immense levees to protect the lands from the river waters. Great drainage systems are being installed to care for the seepage and surface water. The river reclaimed land produces heavily without irrigation.

For several years Sutter County has felt the stimulating effect of the increase in rural population. New families have been arriving and settling upon the farm lands. Grain fields are giving way to orchards, vineyards and other forms of intensive cultivation.

Sutter County has Winter and Summer grazing land for stock. Upwards of 100,000 sheep are run into the county every year to be fattened for market.

In the northern part of the county thousands of acres are irrigated by the Sutter-Butte Canal, which takes its water from the Feather River. In sections not served by the canal, pump irrigation from wells is followed successfully and economically.

Transportation facilities are good. The Sacramento River is an outlet for the products on the western border of the county. Two lines of the Southern Pacific Railroad pass through the county and the Northern electric road crosses the county in two directions.

The total assessed valuation of Sutter is \$13,270,000. The county is entirely free from debt and enjoys an economical government.

Being primarily a farming county, Sutter has no large cities. Yuba City, the county seat, situated on the west bank of the Feather River, opposite Marysville, the county seat of Yuba County, is a beautiful little city of homes. The character of the residences testify to the prosperity of the community. The city owns its own water system, is lighted by electricity and has good business houses.

Meridian, on the Sacramento River, is in the center of a wonderfully rich farming section. It is connected with Yuba City by an electric railway. Live Oak is a rapidly growing town in northern Sutter.

Nicolaus, Vernon, Tudor, Sunset, Sutter City, Oswald, Marcuse and Chandler, are all centers of producing sections.

Sutter invites thorough investigation of new settlers in the Sacramento Valley. Its advantages are many. It has an excellent system of schools and all the towns have churches of various denominations. No liquor is sold in the county.

Land can be purchased in Sutter at prices ranging from \$100 to \$300 an acre. The price variation is determined by location, quality of soil and transportation facilities.



TEHAMA COUNTY SCENES—IRRIGATING AN ORCHARD; CUTTING ALFALFA.



TEHAMA COUNTY

Stretching across the great Sacramento Valley from the Sierra Nevada Mountains on the east to the Coast Range on the west, lies Tehama County. Within its boundaries are 2,893 square miles, and it is about twice as large as Delaware and three times as large as Rhode Island. It has a diversified topography, ranging from river bottom lands to high mountains.

The county is bisected by the Sacramento River, which crosses it from north to south. On both sides of the river beyond the river bottoms are great areas of table lands, locally called bench lands, which, when irrigated, are unexcelled for the production of deciduous and citrus fruits, berries, nuts, etc. Water is plentiful for irrigation, both by gravity canals and from wells. During recent years a number of wells have been sunk and it has been ascertained that at depths ranging from 20 to 250 feet, a bountiful supply of pure water is to be had.

Tehama County is now attracting great attention. In former years most of the agricultural land in the county was held in great acreages and farmed to grain or used for stock raising. For that reason, Tehama County has always been an important grain and wool center. In recent years, however, some of these great tracts have been broken up and are now being subdivided into small farms. Scientific methods of soil culture are being introduced and the county is undergoing a change. The great farms of 10,000 or more acres will soon pass forever from view and in their places will be hundreds of small tracts devoted to the culture of alfalfa, fruit, poultry, truck gardening, berries, etc. As forerunners to the new era are the prosperous colonies of Corning and Los Molinos, where there are hundreds of new settlers making good on their recent purchases.

The fruit industry in Tehama gives employment to a large number of persons during the season and the annual value of the crop exceeds \$1,000,000. The bulk of the deciduous fruit crop is dried, although many carloads are shipped to Eastern markets in the fresh state. One of the best paying Bartlett pear ranches in California is on the Cone ranch, near Red Bluff. Peaches are also grown extensively and profitably, as are prunes and apricots. Since the introduction of the blaspheg in California, the insect which fertilizes the Smyrna fig, the culture of figs promises to become a paying industry. Almonds are produced and in twenty years in which they have been grown in the county, there has never been a total crop failure. Walnuts are also a paying crop.

Oranges and lemons do well and bear abundantly. The olive is also in great favor as a crop, especially in the vicinity of Corning, where there is a large pickling plant and oil factory. Apples are grown in the foothills. At Manton, thirty-five miles northeast of Red Bluff, the county seat, very fine apples are grown.

Grain is still produced in great quantities. Wheat, barley and oats are produced and much hay is grown.

Dairying is becoming an important industry and the opportunities along this line are hardly touched. Alfalfa grows abundantly and is



HARVESTING GRAIN AND SHEEP RAISING IN TEHAMA COUNTY.

the best food for dairy cows. There are several creameries in the county, which take the cream output from the farmers, paying cash for the product.

Beef cattle and sheep are raised extensively, the grazing land being the finest. The ranges on the hill slopes provide excellent feed all during the Summer and Fall months.

Tehama County has always attracted attention of the officials of the United States Reclamation Service because it holds the key to irrigation of thousands of acres of Sacramento Valley lands. In the Sacramento River just above Red Bluff is Iron Canyon, a natural dam site, where it is proposed to erect a dam for the purpose of storing sufficient water to irrigate much of the Sacramento Valley lands. The proposition is now being investigated by the Government.

The main line of the Oregon and California branch of the Southern Pacific Railroad passes through Tehama County, affording the best of rail transportation facilities. The West Side Electric Railway now being built will have its northern terminal at Red Bluff. The State Highway passes through the county, connecting the principal communities, and the Sacramento River is navigable for trade boats as far north as Red Bluff.

The natural scenery of the county is beautiful. Red Bluff is one of the starting points for tourists who visit Mt. Lassen, an active volcano, which has been in a state of eruption at various intervals since June, 1914. Although the slopes of Mt. Lassen extend into Tehama County, the peak is just beyond the borders in Shasta County.

Game is plentiful in the foothill and mountain sections and all the streams are stocked with trout.

Tehama County has good district schools and two excellent high schools—one at Red Bluff and one at Corning—where students are prepared for the universities.

Red Bluff, the county seat and largest city, is an attractive place with many pretty homes. It is a business center, being the clearing house through which most of the products of the county are marketed and the supply point for a large territory. It has wide streets, is well lighted and well drained. It has two fruit packing establishments, a creamery, three newspapers, several banks, large lumber yards and other important industries.

Corning, the second city in size, is incorporated. It is the center of a prosperous farming colony. Fruit growing and poultry raising are its chief industries. Corning is destined to be the center of one of the greatest olive growing districts in California. A large pickling and olive oil plant has been established by H. G. Heinz at Corning.

Tehama, at the junction of the two lines of the Southern Pacific Railroad, is in the center of a rich farming section.

Other towns in the county are Los Molinos, Vina, where the farm of the Stanford University is located, Paskenta, Henleyville, Manton, Lyonsville, Kirkwood, Proberta and Red Bank.

The climate of Tehama is temperate. The Winters are mild, snow seldom falling except in the mountains. While the temperature sometimes exceeds 100 degrees in Summer, the heat is dry and not oppressive. It is the kind of heat that ripens the fruit crop and puts profits in the pockets of the farmers.



THE ROWS OF TREES



SACRAMENTO COUNTY

Sacramento County, situated at the southern end of the great Sacramento Valley, is the fourth in point of wealth and sixth in point of population in California. It is one of the oldest counties in California, having been formed by an act of the first Legislature that

assembled in the Golden State. Its early history teems with interest as it records the stirring deeds of the brave pioneers who came here in the days of '49 seeking fortunes in the mines.

But we are concerned now more with the present and future of the county than its history. It is a growing and prosperous community, offering special advantages to the home seeker. It possesses soil, climate, water, transportation facilities and markets—the five factors that are essential to the farmer's success. Its farm products include all deciduous fruits, grapes, berries, nuts, citrus fruits, alfalfa, cereals, stock, poultry and eggs, butter and cheese, etc. It is a county in which large tracts are being subdivided into small farms, and hence, there is plenty of opportunity for the settler to purchase unimproved land.

Sacramento County has an area of 988 square miles, most of which is farm land. The population of the county in 1910 was 67,806. It is now estimated at 90,000, as there has been a noticeable increase during the past four years. The area is mostly either fertile bottom lands lying along large rivers, or rich alluvial plains. The altitude varies from 30 to 125 feet, the land rising in gentle slopes on the eastern border of the county to meet the lower foothills of the Sierra Nevada mountains.

Sacramento County has an abundance of water, being supplied by many streams. The great Sacramento River, which flows the full length of the Valley, from Mt. Shasta to San Francisco Bay, is the western boundary of Sacramento County for a distance of about one hundred miles. The San Joaquin River, the other great waterway of the interior of Northern California, touches the county on the south. The American, the Cosumnes and the Mokelumne, all streams of importance, carrying water the year round, flow across the county. The Sacramento, the San Joaquin and their tributaries through many years of constant flow, have formed the rich delta lands of southern Sacramento County. This delta was once a great area of swamp land, subject to annual overflow, but through expenditure of vast sums of money, has been thoroughly reclaimed by the construction of great dykes, called levees in California, which keep the water from the cultivated fields. The delta, often referred to as the Netherlands of California on account of the similarity of the reclamation work to the dykes of Holland, consists of a number of islands, each of which is surrounded by a navigable waterway.

No more fertile land is to be found anywhere in the world, not even in the famous Valley of the Nile, than this rich river bottom. Here are produced the vegetables that during certain months of the year supply the principal markets, not only of California but of several States, including Washington, Oregon, Nevada, Utah, Idaho and Montana. This is also a district of luscious fruits and each year several



thousand carloads go forward to Eastern markets from the river districts of Sacramento County alone.

Equally as rich as the land along the Sacramento River is that along the Cosumnes and American Rivers. Both of these districts are noted for a large variety of products which they produce to perfection. Hops that grow along the Cosumnes River are as fine as any grown in the world and command the highest prices in the market. This district is also noted for its fruit.

But all the land of Sacramento County is not river bottom land. There are great alluvial plains containing thousands of acres of fertile land suited to the culture of a vast variety of profitable products. Not many years ago these plain lands were all farmed to grain, but during the past few years, as in other sections of the Valley, grain farms have been subdivided and ten and twenty-acre tracts devoted to intensive cultivation have succeeded them. The plains are exceedingly productive when irrigated and this is made easy because of the inexhaustible supply of water that underlies the entire area of Sacramento County. All that is necessary to obtain water is to sink a well from fifteen to forty feet and a flow sufficient for irrigation is obtained. The water is lifted from the well by a pump run by either a gasoline engine or an electric motor. Either is inexpensive. The possibilities of irrigating from wells in this county are well illustrated in the Florin district, just south of Sacramento City. This is a great Tokay grape and strawberry district. The only irrigation the plants receive besides the natural rainfall, is from the well water. Florin annually ships many carloads of grapes and even more of strawberries to markets beyond the borders of the State.

Besides the bottom and the plain lands, there is still another class of productive land in Sacramento County. This is the rolling land at the beginning of the foothills of the Sierra Nevadas. This rolling land lies north of the American River and is no doubt the most picturesque part of all Sacramento County. It includes the prosperous colonies of Orangevale and Fair Oaks, noted for their production of citrus and semi-tropical fruit. Practically all the oranges grown in Sacramento County come from the pretty groves on the gentle slopes of Orangevale and Fair Oaks. Here, like in all Sacramento Valley counties that grow oranges, the golden fruit ripens from six weeks to two months earlier than that of any other orange growing district in the United States. Olives and almonds are also profitable crops in these colonies and the homes of some of the owners of tracts, as picturesque as any in California, are indicative of prosperity.

Sacramento City, the county seat and the capital of the State, is situated on the east bank of the Sacramento River, which is navigable the year round as far north as Red Bluff, 150 miles north of Sacramento. It has a population of 75,000 and an assessed valuation of \$65,000,000. Several lines of freight and passenger steamers ply between Sacramento and San Francisco and the passenger steamers are floating palaces similar to those on the Hudson River. Two transcontinental steam roads and four interurban electric lines enter Sacramento, which is an industrial city. The main shops of the Southern Pacific and Western Pacific railroads are located here. There are also three great fruit canning institutions and many factories of various kinds.





TRINITY COUNTY

Trinity County is situated in the Coast Range Mountains, just east of the northern end of the Sacramento Valley and is drained and watered by the Trinity, Mad, Eel and Van Dusen Rivers. It is a mountainous region, its hills and peaks ranging in altitude from a few hundred to more than 9,000 feet.

Through these hills and mountains flow numerous streams, nearly all of which are a part of the watershed of the Trinity River, which rises in the northern and eastern part of the county, and leaving the county's confines, empties into the Klamath River.

Mining has been the principal industry of the county for more than fifty years. Other industries are farming, grazing and lumbering. Hydraulic, placer, drift, dredge and quartz mining are all followed with profitable results and there are still hundreds of acres of auriferous gravel awaiting exploration and many quartz veins that are untouched. Hydraulic mining is vigorously prosecuted in various parts of the county under conditions which enable that branch of mining to be conducted more advantageously than in any other part of the State. The placer grounds are so situated that the debris from their workings passes into the Trinity and finally into the Klamath River, which are unnavigable and hence are not injured by the operations. The heavy grade of the streams, the abundant rainfall, the heavy depths of snow in the high mountains, the temperate climate, the abundance of timber and the favorable character of the gold bearing gravel, make Trinity ideal for the hydraulic miner.

A number of the best equipped and among the largest hydraulic mines in the world are in operation in this county. A great many mines have been constantly worked with favorable results for many years. The large bodies of undeveloped ground present a promising field for investment. Ledges of gold bearing ores have been discovered at nearly every point where paying gravels have been worked and new prospects are being constantly found in various parts of the county. Improved methods of working and milling have attracted attention to bodies of low grade ore not regarded formerly as profitable. Quartz mining, therefore, is being developed and the county is destined to become one of the leading quartz mining counties in California. As in hydraulic mining, conditions are favorable for quartz mining, there being an abundance of timber and of water and the climatic conditions being favorable.

Along the Trinity River and its tributaries are numerous bars of rich gravel. They are at too slight an elevation to be successfully worked by hydraulic method, but offer a successful field for dredge mining. With the aid of electric power, dredge mining promises to take its place in Trinity County with the hydraulic and quartz industries.

Extensive bodies of Cinnabar ores have been found and worked in the northern end of the county and Cinnabar has been found near Weaverville and on Canon Creek.

Near Trinity Center, Weaverville and Douglas City, deposits of



WOODLAND SCENE IN TRINITY COUNTY.

asbestos have been uncovered. A considerable amount of platinum and iridium is found with the Placer gold in the Hay Fork, Junction City and Lower Trinity districts. Copper ores of high grade values are found in the northern central portions of the county, which give every promise of being developed into extensive and profitable mines.

While but little has been done toward the discovery and the working of any minerals other than gold, what has been done justifies further investigation as the prospects are favorable for opening up profitable bodies of valuable minerals.

Though Trinity is primarily a mining county, there are large sections of tillable land which with irrigation during the Summer months will produce abundant crops of grasses, hardy fruits, berries and grains. In the lower elevations and particularly along the Trinity River and in the southern end of the county, peaches, pears, plums, apples, apricots and grapes are produced which in flavor, quality and abundance of yield, compare with like fruits produced in any section of California. The soil is adapted for the raising of alfalfa and grains. Vegetables and berries of every variety thrive and there is a home market in the mining districts for everything that is produced.

Nuts of all kinds do well—chestnuts, almonds, walnuts, hickory nuts, pecans, in fact all of the common ones doing remarkably well.

In the southern and western portions of the county olives have been successfully raised.

There are excellent opportunities for dairying in the county and stock raising is now carried on in some sections on a large and profitable scale. In the vicinity of Hay Fork, Heyampon and Trinity Valleys there are bodies of fertile, well watered soils. Grasses grow abundantly on these lands and they are well suited to such industries as hog and sheep raising.

Stock raising is remunerative and one of the great coming industries. Range land is ample and there are many native grasses. Climatic conditions are favorable and markets are close at hand.

Throughout the county there are very extensive bodies of first-class timber and there are numerous small saw mills in operation during the Summer months. Sugar pine, spruce, fir and yellow pine are the principal merchantable woods. In the southern part there is also quite an area of tan bark oaks.

Trinity County, owing to its never failing water supply and the steep grades of its water courses, offers great inducements for the construction of electric power plants.

The county seat is Weaverville, a picturesque place in the heart of the mountains. The county has a good school system and an efficient corps of teachers.

One branch of the State Highway passes through the county, connecting the Sacramento Valley with the Coast counties. This road across the mountains is extensively traveled during the Summer months and is one of the scenic driveways of the State.

As a Summer camping ground no place in the world can be found to excel this county. Its altitude is all that could be desired, the wonderful scenery, clear running brooks teeming with fish, game to be had with little exertion, the wonderful scenic roads and trails, must be seen to be appreciated, and once seen will never be forgotten.



TYPICAL YOLO COUNTY DECIDUOUS FRUIT ORCHARD IN FULL BLOOM.



YOLO COUNTY

By H. S. MADDON

Situated sixty miles from the Exposition City, in a northeasterly direction; immediately across the Sacramento river from and west of California's capital city; lying directly between San Francisco, Portland and Sacramento—is Yolo County.

Almost in the center of California, and the great fertile Sacramento Valley—is Yolo County.

Our argument has to do primarily and principally with the farmer, the man of family who is seeking a location in the last great West, the Pacific Coast States of America.

To such a man, three factors stand out most prominently in the development of the varied resources of Yolo County, to wit: in order of their importance, irrigation, reclamation, subdivision. More money has been expended in irrigation enterprises during the past two years than in all previous history; more has been expended in reclaiming low and overflow lands and placing them in a high state of production in the past three years than in all previous years combined. Results? More than twenty subdivision propositions are now on the market, many of them offering small farm units at tempting figures and terms to the purchaser who may have but a little ready cash to apply.

Water, both surface and subterranean, everywhere present for irrigation at all seasons; with diversified crops intensively farmed, proves conclusively that the man with but a few acres, say twenty to forty, is accomplishing larger and more certain results with less of labor and of worry than the man with an excess of acres.

Yolo is truly a progressive county. It is really an agricultural community without any great city to overtop and dominate its affairs. There is a cohesiveness about the county that gives it strength. It is governed by a board of five Supervisors, every one of them a man of the soil, individually and collectively; men who think first of the benefit and needs of those who make more grow than ever grew there before. To this end they maintain a County Horticultural Commissioner with eight assistants who are in constant touch with every farmer in the county; a government "Farm Adviser" who devotes his entire time in the field, giving attention and encouragement to farmers who seek it, maintaining bureaus throughout the county at convenient places where neighborhood meetings are held at frequent intervals; a magnificent public school system with free books for pupils; a free Carnegie library with 53 county branches, and a County Board of Trade with a number of branches in charge of competent men. These organizations are all supported by the County Supervisors, and they obtain funds from no other source, that the home-seeker and investor may be supplied with accurate, unbiased information, advice and helpful suggestions free of charge.

The county contains nearly half a million acres of about floor level land; the largest contiguous body of unbroken soil of any county in the West. Let us quote Elwood Mead, United States Government soil expert, who in reporting result of his soil and product investigations



VIEW OF A DAM DIVERTING WATER FOR IRRIGATION IN YOLO COUNTY.

in Yolo County said: "It is ideal grain, alfalfa and fruit land. You may find growing on this soil wheat, barley, corn, oats, alfalfa; all the vegetables of a temperate and sub-tropical climate; apples, figs, pears, apricots, nectarines, plums, prunes, oranges, lemons, limes, pomegranates, grapes (table, wine and raisin), almonds, olives, English walnuts, berries of all kinds, and melons."

The transportation problem has been splendidly solved in Yolo County. A number of steam and electric railways permeate every section of the county, and with a frontage of ninety miles on the Sacramento river, which is always navigable, give every town and village within its borders excellent shipping and marketing facilities.

Yolo County producers are within one hundred miles of more than one million consuming peoples.

This county has the lowest tax rate, with but one or two exceptions, of any county in Northern California, and is virtually out of debt with all current bills paid in full.

This county is favored with nearly one hundred rail and water shipping points. Many of them are splendid towns and villages, having fine schools, churches, a high class American citizenship, and with one or two exceptions, are free of saloons.

Woodland, the county seat, in the center of the county, is one of the most progressive cities in California, and its clean, well-paved streets are lined with magnificent residences and fine business blocks. Woodland has more money in bank, and bank assets than any town of similar size in the entire country, and this wealth came from Yolo County's peerless soil.

Winters, situated twenty miles southwest of Woodland, is the second largest town in the county. It lies at the base of picturesque hills, and is in the very center of Putah Creek's rich delta lands.

Guinda and Rumsey are located near the head of Capay Valley, one of the most beautiful and picturesque spots in the Sacramento Valley.

Capay is situated where the Capay Valley opens into great Sacramento Valley. Esparto is three miles from the entrance to Capay Valley. Madison is twelve miles west from Woodland. These are all thriving towns in important farming sections.

Davis is situated on Putah Creek, thirteen miles west of Sacramento and ten miles south of Woodland. It is a railroad junction and enjoys excellent transportation facilities.

The University farm operated in conjunction with the Agricultural Department of the University of California, is situated at Davis. This site was chosen after considering seventy-seven other localities in California. This was due to the superior climate, soil and transportation advantages of Yolo County. The soil is adapted to almonds, fruits of all kinds, and alfalfa.

Dunnigan and Zamorra are railroad towns in the northern part of the county. Yolo is a flourishing village in the heart of a great fruit section. Knights Landing is the most northerly river town in the county. Then we have Washington and Bryte City just across from Sacramento, also West Sacramento and Clarksburg nearby. All these towns, in fact, all the towns throughout the county, are in flourishing condition. All are making, and will continue, a good substantial growth indefinitely.





YUBA COUNTY

Yuba County, while one of the smallest in the Sacramento Valley, having an area of only 638 square miles, is one of the richest in resources in all California. In the early days Yuba was famous as a gold producer. To-day, while still a heavy contributor to the State's output of precious metal, principal importance attaches to its agricultural production and it is far more famous for some of its farm products. For instance the largest hop fields in the world are located at Wheatland in this county and the quality of hops grown compares favorably with those of the best hop yards of Europe.

This county offers exceptional advantages to the homeseeker and settler. The soil and climatic conditions are favorable to the production of practically every crop known to temperate and semi-tropic climates. The crops principally grown are wheat, barley, oats, hops, beans, alfalfa, garden truck, fruits, grapes and nuts. Some Indian corn is grown on the low moist lands near the rivers or by irrigation, also Egyptian corn and other grain bearing sorghums.

The orchard crops principally grown are pears, peaches, plums, prunes, apples, olives and grapes. Among other orchard crops grown here are oranges, lemons, grape fruit, cherries, apricots, nectarines, figs, almonds and walnuts. Apples do especially well in the higher foothill and mountain areas and will no doubt become an important product when this region has the advantage of railroad transportation.

The subdivision of large tracts of land has been going on steadily for several years and this has brought new settlers into the county; as a result new farms are being developed and new crops introduced.

During the last few years there has been a large planting of alfalfa which thrives luxuriantly, producing when irrigated five or six crops a year, and providing the basis for a rapidly growing dairy industry which promises to become one of the most important in the county, as it is one of the most profitable.

A considerable area is under irrigation and this is constantly being increased. The principal irrigation canals are the Browns Valley and Hallwood systems which together irrigate several thousand acres. Along the Feather River extensive areas are irrigated by pumping, and some valley land is irrigated from wells, an abundant supply of water being secured near the surface at a comparatively small cost.

Cheap electric power is available for pumping and for other farm uses. Many Yuba County farms have motors installed for driving pumps and other farm implements, with electric lights in house and barn. The first successful long distance electric power transmission line was built to convey to San Francisco power generated in this county. This plant, at Colgate-on-the-Yuba, now has a capacity of 20,000 horsepower and is one of a great chain of power generating stations which utilizes the waters of this and other streams in this and adjoining counties.

The mineral resources of Yuba are great. The methods of mining now followed include placer, quartz and dredge. In the upper foothills and mountain sections, quartz mining is successfully followed



and rich strikes have been made in recent years which have had a tendency to stimulate this important industry. Dredge mining is followed successfully along the bed of the Yuba river, where there are great deposits of gold bearing gravel. The annual gold output of Yuba County is between \$2,000,000 and \$3,000,000.

In a county where most of the boundary lines are never-failing streams, it is but natural to expect that there is plenty of water for all purposes. This is the condition in Yuba County. The Feather and the Yuba Rivers are both important streams.

Transportation facilities are excellent; the main California-Oregon line of the Southern Pacific Railway Company passes through this county, also the Western Pacific Railway, a new trancontinental line, and the Northern Electric Railway, which is a part of an extensive interurban system centering at Sacramento and San Francisco. During certain seasons of the year the Feather River, which is the county's western border, is open to navigation as far as Marysville.

Yuba offers enjoyable recreation to the sportsman. The county's streams and forests afford the best of fishing and hunting during the proper season. Quail and dove are numerous in the valley and foothill sections, while in the higher altitudes deer are plentiful, and occasionally a bear falls before the gun of the skilled huntsman. Ducks and geese are abundant along the rivers and lakes.

Marysville, the county seat and railway center of Yuba County, is a prosperous and progressive city of 7,000 population situated at the confluence of the Feather and Yuba Rivers. Since the early days Marysville has been an important commercial city; for years it was the principal supply point of Northern California and to-day it is the trading center of a large territory. Some idea of its importance may be gathered from the fact that there are located at Marysville three large banks, the combined resources of which on January 1, 1914, were \$5,300,000; total deposits, \$4,200,000; total capital and surplus, \$870,000. Because of its importance as a trading center and lines of communication extending in many directions Marysville has been called the "Hub City."

The second city of the county is Wheatland, known far and wide as the center of the principal hop district of California and the scene of the largest single hop field in the world. Wheatland is the center of an extensive agricultural area producing a wide variety of farm and orchard products and boasting a population of approximately 1,000. There is a bank with resources of \$80,000.

Twelve miles northeast of Marysville is Browns Valley, a farming section comprising 45,000 acres of land. Much of this land is irrigated by a gravity system. The water is taken from the Yuba River in the higher altitudes. In the same district there are a number of rich quartz mines that are now being worked.

Smartsville is east of Browns Valley and eighteen miles from Marysville. It is a historic mining camp, and was a lively place in early days. Mining is still followed in the vicinity and the district is also noted for its production of both citrus and deciduous fruits.

Challenge and Woodleaf are in the timber belt; Camptonville and Strawberry Valley are mountain resorts during the Summer months.

Hammonton is the newest town in the county and is the scene of the principal dredge mining operations on the Yuba River.

TO THE READER

Visitors to the Panama-Pacific International Exposition should by all means see the great and productive Sacramento Valley before leaving California. It is but a short trip from San Francisco to this attractive portion of the State, and it can be reached either by train, steamer or automobile.

To get a comprehensive idea of the wonderful extent of the Valley and its richness in natural resources, one should spend at least a week or ten days and visit each of the counties described herein. Some crop is being harvested every month in the year in the Sacramento Valley and the visitor will find something to interest him, whether he makes his trip here in May or in November.

While the output of this geographical subdivision of California is marvelous, there is still room for intelligent, ambitious and energetic men and women. To such this valley holds out opportunities, we believe, that are not surpassed on the American continent.

Those interested in the Sacramento Valley will have all questions concerning this section fully and clearly answered at the Sacramento Valley display in the California Palace of the Panama-Pacific International Exposition.





ROAD THROUGH FOREST IN SACRAMENTO VALLEY.

SACRAMENTO VALLEY and FOOTHILL COUNTIES

